

Local Mitigation Strategy

LMS
Miami-Dade



Whole Community Hazard Mitigation Part 6: Completed Projects



January 2017

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What is Hazard Mitigation?

“Hazard Mitigation means any action taken to reduce or eliminate the long-term risk to human life and property from natural or manmade hazards.”

Why Mitigation?

Miami-Dade County, in fact, all of South Florida, is vulnerable to disasters of all types affecting every part of our community; no one is immune. We’ve suffered hurricanes, tornadoes, severe flooding, lightening, wildfires, plane crashes, hard freezes, droughts, citrus canker, mass migration and more. Interested?

Want some details? How about this:

- Hurricane Andrew in 1992 – DR 955 – **\$30,000,000,000**
- Storm-of-the-Century in 1993 – DR 982 – **\$50,000,000**
- Tropical Storm Gordon in 1994 – USDA-FSA – **\$90,000,000**
- The Ground Hog Day storms in 1998 – DR 1204 – **\$50,000,000**
- Hurricane Georges in 1998 – ER 3131 – **\$12,500,000**
- Hurricane Irene in 1999 – DR 1306 – **\$800,000,000**
- The No-Name Storm in 2000 – DR 1345 – **\$500,000,000**
- Tornadoes in 2003 – DR 1460 – **\$15,000,000**
- Hurricanes Frances in 2004 – DR 1545 – **\$33,000,000**
- Hurricane Jeanne in 2004 – DR 1561 – **\$10,400,000**
- Hurricane Katrina in 2005 – DR 1602 – **\$500,000,000**
- Hurricane Wilma in 2005 – DR 1609 – **\$4,000,000,000**



That is just a portion of projects that have been embarked upon to make our community more resilient. In 1998 a decision was made to do something about it and the Local Mitigation Strategy was born. Now, it's time to show you what your Local Mitigation Strategy Working Group has been up to.

Mitigation in Miami-Dade



Mitigation is not new to Miami-Dade County or to its municipalities and other organizations. Mitigation, as we know it now, began for us during the recovery period following Hurricane Andrew. FEMA, the Federal Emergency Management Agency, introduced Public Assistance Enhancements, what we call 406 mitigation (from Section 406 of the Stafford Act), which is mitigation that is performed during the repair or rehabilitation of a facility damaged by the disaster event, in this case, Hurricane Andrew. 406 mitigation continued during the recovery effort following each of the disaster declarations issued

since Hurricane Andrew. To protect those facilities that were not impacted by the event, the Hazard Mitigation Grant Program, or 404 Mitigation, is available as a major source of

funding. Of course, there are many other sources of mitigation funding that are discussed in the Local Mitigation Strategy document itself.

In 1998, the state of Florida sponsored the program called the Local Mitigation Strategy (LMS) and provided funding to each county in the state to develop, as the name implies, a strategy to mitigate damages from a local perspective. The concept is to bring together all the parties within a county to work together to make their communities safe from disasters.

In Miami-Dade County, we have truly made this work. Our municipalities, our county departments, our colleges and universities, our schools, our outreach organizations, our faith based community and our private sector companies have all joined together in the Miami-Dade LMS Working Group and made the Local Mitigation Strategy a reality.

The purpose of this supplement to the Local Mitigation Strategy is to document all the fine work that has been accomplished in Miami-Dade County through the efforts of the LMS Working Group.¹

¹ EMAP 4.4.4

406 Mitigation



Floating Docks



Protected Electric



Stronger Towers



Stabilized Banks



Canal Cleaning & Shaping

Or, PA Enhancements in Miami-Dade

Windstorm Mitigation



One of the major causes of damage in South Florida is windstorm: hurricanes, tornadoes and severe thunderstorms. We have been impacted by Hurricane Andrew in 1992, Storm-of-the-Century in 1993, Tropical Storm Gordon in 1994, The Ground Hog Day tornadoes in 1998,

Hurricane Georges in 1998, Hurricane Irene in 1999, the “No-Name” storm of 2000 and more tornadoes in 2003, Hurricanes Frances and Jeanne in 2004 and most recently, Hurricanes Katrina and Wilma in 2005.

It has been a primary goal of the Miami-Dade Local Mitigation Strategy Working Group to mitigate against windstorm whenever and wherever possible. The principle cause of damage in a windstorm is from flying debris that shatters the windows and allows high winds to breach the building envelope, which, in turn, can cause the roof to fail. The most effective, cost beneficial measure to accomplish this is the installation of window protection. Window protection carries one of the highest benefit-to-cost ratios of any mitigation measure. Window protection includes storm panels, accordion shutters, roll-down shutters, passive perforated metal plates, laminated glass, Lexan and other heavy glass. Although very popular, the use of plywood is not recommended because of the difficulty putting it up in a hurry and storing it.

This windstorm mitigation has many faces within the LMS program. We have developed the residential shuttering program that installs free hurricane panels on the homes of low-income elderly citizens in our community. We have provided window protection to several organizations that shelter the homeless thereby no longer requiring them to go to a general population shelter during a storm. We have protected county buildings, municipal buildings, university buildings, public school buildings and so on and so forth with the ultimate goal of having every building in Miami-Dade County protected.

The following are examples of wind storm protection completed since the Local Mitigation Strategy Working Group was formed in 1998.



Academic Institutions

Miami Christian School



One of five buildings protected by perforated steel window coverings through Hazard Mitigation Grant Program for total of \$230,000. These grants were awarded under FEMA DR-1545, DR-1561 and DR 1609



American High School**Schools Retrofit as Hurricane Evacuation Centers****American Senior High School, a part of Miami-Dade County Public Schools**

American High School, above, was retrofit to serve as a hurricane evacuation center serving the public during a hurricane evacuation. Other schools also retrofitted were Barbara Goleman Senior High, Citrus Grove Elementary, Miami Springs Senior High, Southridge Senior High, Sunset Senior High, North Miami Middle School, South Miami Senior High and Southwood Middle School. The combined total cost of the retrofit was \$3,612,000 and was funded by the Hazard Mitigation Grant Program through FEMA-1306-DR-FL, Hurricane Irene.

**Miami Springs H.S.****Miami Southridge H.S.
Middle****North Miami**

Florida International University



The third floor of the **FIU Biscayne Campus** library in North Miami has been hardened for use as a hurricane shelter at a cost of \$366,000 and funded by the Hazard Mitigation Grant Program through FEMA-1204-DR-FL, the February 1998 Ground Hog Day tornadoes. Note: This was the first project completed following the formation of the Local Mitigation Strategy.



Johnson & Wales University



Located in North Miami, Florida, this university has an on-campus hurricane shelter created to house the university's residential students during a storm. The shelter, centered on the university library and containing a gourmet kitchen, cost \$33,000 and was funded by the Hazard Mitigation Grant Program through FEMA-1204-DR-FL.



University of Miami



The University's Richter Library, above, is one of twelve campus buildings protected by perforated metal panels at a combined total cost of \$1,040,000 and funded by the Hazard Mitigation Grant Program through FEMA-1300-DR-FL.



University of Miami



Alumni House



Cuban American Studies



Educational Research



Behavioral Medicine



Nursing

Dining Hall

Perforated Steel @ \$1,040,000

Florida International University



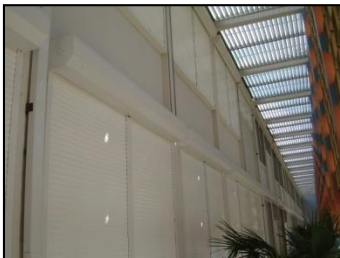
The student dormitories at the University Park campus have steel wire mesh window protection installed that is hinged and opens out at the center. The total cost is \$1,900,000 funded by the Hazard Mitigation Grant Program through FEMA-1300-DR-FL.



St. Thomas University



Kennedy Hall, the university's main administration building, is protected by roll-down shutters throughout. This building houses all the university's important records and the cost of \$300,000 was funded by the Hazard Mitigation Grant Program through FEMA-1345-DR-FL, the No-Name storm of the year 2000.



St. Thomas University



Cassia Dormitory, above, along with Donnellan Hall and the cafeteria have window protection at a cost of \$313,000 through FEMA-1602-DR-FL



University of Miami



The University's Performing Arts Center, above, is one of three medical campus buildings protected by perforated metal panels at a combined total cost of \$3,618,000 and funded by the FEMA Pre-Disaster Mitigation Grant Program of 2003.



**Mailman Center for Child Development
Sciences**



**Rosenstiel Medical
Sciences**

University of Miami



The University's **Rosenstiel School of Marine and Atmospheric Science** including the Aplysia Rearing Facility, CIMAS Building, Doherty Marine Science Center, Grosvenor – East, Grosvenor – South, RSMA Science & Administration Building is protected by heavy duty accordion shutters at a total cost of \$466,900 and funded by the FEMA Pre-Disaster Mitigation Grant Program of 2004-2005.



Homeless Shelters

Community Partnership for the Homeless, Inc



This downtown Miami homeless shelter houses over 500 individuals plus staff and is protected by heavy-duty hurricane glass installed throughout at a cost \$99,000 and funded by the Hazard Mitigation Grant Program through FEMA-1204-DR-FL.



Miami Rescue Mission



This homeless shelter is located in downtown Miami. The men's dormitory (above) and women's dormitory (below) are protected by at a cost of \$158,000 and funded by the Hazard Mitigation Grant Program through FEMA-1300-DR-FL.



Unincorporated Miami-Dade County

Miami-Dade Police Department



The Miami-Dade Police Northwest District Station has a reinforced roof at a cost of \$103,000 and funded by the Hazard Mitigation Grant Program through FEMA-1539-DR-FL



Miami-Dade Police Department



The Miami-Dade Police Training Bureau building was hardened at a cost of \$102,000 funded by the Hazard Mitigation Grant Program through FEMA-1545-DR-FL



Miami-Dade Police Department



The Hammocks District Station and Northside District Station have hardened roofs at a cost of \$318,000 and funded through the FEMA Pre-Disaster Mitigation Program Of 2004-5. This station also received \$90,000 for window protection through the state's Residential Construction Mitigation Program.



Northside District Station**A Protected AC System**

This air handler at the Miami-Dade Information Technologies Building has accordion shutters installed to protect it from flying debris during a storm. The shutters are closed just before the arrival of tropical storm force winds and reopened as soon as the winds subside. The system is also protected from possible loss of the county water supply by allowing the system to draw directly from ground water for cooling then immediately returning the water back to ground. Total cost: \$220,000

Port of Miami



Terminal H at the Port of Miami has windstorm protection provided by passive, perforated metal panels costing \$395,000 and funded by the Hazard Mitigation Grant Program through FEMA-1609-DR-FL, Hurricane Wilma.



Municipalities

City of Sweetwater



The city hall, which also houses the city's Police Department, has windstorm protection provided by passive, perforated metal panels costing \$130,000 and funded by the Hazard Mitigation Grant Program through FEMA-1300-DR-FL, Hurricane Floyd.



City of North Miami Beach



The North Miami Beach City Hall is one of seven municipal buildings in the city of North Miami Beach with window protection installed at a cost of \$70,000 and funded by the Hazard Mitigation Grant Program through FEMA-1345-DR-FL.



Solid Waste Facility



Washington Park



Allen Park Center

City of Miami Springs



The Senior Citizen's Activity Center in the city of Miami Springs was outfitted with accordion shutters at a cost of \$17,000 and funded by the Hazard Mitigation Grant Program through FEMA-1345-FL-DR.

City of Miami



Install Shutters on the city's GSA Property Maintenance Building for \$22,000 through the Hazard Mitigation Grant Program through FEMA-1345-DR-FL.



City of Miami



Retrofit the city's GSA Fleet Maintenance Garage for \$565,000 through the Pre-Disaster Mitigation Program of 2003.



Village of Pinecrest



The municipal building in the village of Pinecrest was hardened to withstand the strongest of hurricanes at a cost of \$342,000 and funded by the Hazard Mitigation Grant Program through FEMA-1345-FL-DR.



Hospitals

Miami Children's Hospital



Miami Children's Hospital is the only licensed specialty hospital exclusively for children in South Florida. The entire main building was encapsulated to provide protection against the most severe windstorm. \$5,000,000 of the encapsulation cost was funded by the Hazard Mitigation Grant Program through FEMA-1345-DR-FL.



Baptist Health South Florida



Doctor's Hospital in Coral Gables has a wind retrofit at a cost of \$2,027,000 and funded by the Hazard Mitigation Grant Program through FEMA-1545-DR-FL



Jackson Health System



The **Highlands Professional Building** with steel screen through the Hazard Mitigation Grant Program for \$487,000 by FEMA 1602-DR-FL.



Jackson Memorial Hospital



The Ambulatory Care Center at Jackson Memorial Hospital is protected by perforated steel window coverings for a total of \$716,000 through the Pre-Disaster Mitigation Program of 2004/5.



The Public Health Trust



Central Building
\$222,000



Rehabilitation Annex
\$395,000



South Wing
\$414,000



West Wing
\$526,000



Window protection through the Pre-Disaster Mitigation Program

Citrus Health Network



This medium sized mental health hospital is located just off the Palmetto Expressway in Hialeah, Florida. Accordion shutters have been installed throughout at a cost of \$127,000 and funded by the Hazard Mitigation Grant Program through FEMA-1204-DR-FL. Additionally, the hospital telephone system has had a ground fault system installed to protect against lightning strikes.



Low Income Housing

Hialeah Housing Authority



Ashley Plaza public housing has steel screen window protection at a cost of \$314,400 and funded by the Hazard Mitigation Grant Program through FEMA-1609-DR-FL.



The Residential Shuttering Program

House #1



House #1000



The Residential Shuttering Program installs aluminum storm panels on the homes of low-income elderly residents of Miami-Dade County and its municipalities. Pictured above left is house number 1 completed in January 2002. On August 27, 2004, panels were installed on house number 1,000. Also, in this program exterior doors that open in are reinforced as added protection to the building envelope. This project is funded in excess of \$2,000,000 through the Residential Construction Mitigation Program, the Hazard Mitigation Grant Program and appropriations by the Miami-Dade County Board of County Commissioners. The Miami-Dade County Community Action Agency is the lead agency for this program.



The Shuttering Committee

Other Projects: The CHARLEE Project



This program provides group homes for troubled youth. This is the **Kendallwood House**, one of four such homes with accordion shutters installed for \$75,000 provided by the Hazard Mitigation Grant Program through FEMA-1345-DR-FL.



Shenandoah House



Bayshore House



Pine Acres House

Flood Mitigation

The hydrological characteristics of South Florida are unique. Because it is so flat, we will never have huge volumes of water racing down the hillside destroying everything in its path. Flood damage here is much more subtle. We have just the opposite problem; the lack of slope means rainwater does not rapidly run off but must be absorbed into the ground. So, when the ground is saturated and the lakes and canals are full, there is nowhere for the rainfall to go hence, we flood.



The main substrate in South Florida is oolitic limestone that is extremely porous; in layman's terms, like a giant sponge and, like a sponge, works best when it's damp. Neither a totally dry sponge nor a sopping wet sponge works; the damp sponge is what absorbs water. This is why one of the major stormwater management methods in South Florida is the use of ground recharge systems more commonly referred to as French drains.

In 1998, the Quality Neighborhoods Improvement Program (QNIP) bond issue was passed by the voters of Miami-Dade that includes, among other things, approximately \$50 million for stormwater drainage projects throughout the county. The county funded mitigation measure was used as the main local cost match for the ensuing C-4 Basin Initiative.

Additionally, appropriations by the state legislature for stormwater drainage projects within Miami-Dade County municipal boundaries has averaged \$10 million to \$15 million annually for fiscal years 2001 thru 2004. These are primarily ground recharge systems with outfalls to various primary and secondary conveyance canals or to nearby lakes.

At the same time as the above noted projects are going on, major cleaning and shaping of the secondary canal system is underway under the supervision of the county's Department of Environmental Resources Management and is funded by "406 Mitigation" tied to Hurricane Irene and the No-Name Storm of the year 2000.

The C-4 Basin Initiative



In October of 1999, Hurricane Irene passed over Miami-Dade County causing severe flooding. Then, in October of 2000, one year later, the No-Name storm hit once more causing severe flooding. The governor of Florida tasked the Local Mitigation Strategy Working Group, acting as the *Governor's South Florida Flood Task Force*, to find a solution to the flooding problems. A committee was formed and the South Florida Water Management District was chosen as the lead agency in the effort. Other organizations on the committee were the Miami Dade

Office of Emergency Management, Miami-Dade Department of Environment Resources Management, the Florida Division of Emergency Management, the U.S. Army Corps of Engineers, URS Corporation, PBS&J and the municipalities along the waterway.

An analysis was made of the entire county looking at such things as lane-miles of damage to roads, populations of the various hydrological basins, and flood damage claims filed with insurance companies, FEMA and the Small Business Administration. The results of the analysis pointed to the C-4 or Tamiami Canal basin as the place to start.

The major components of the initiative are large pumps installed downstream of the flooded area to move outflow against an incoming tide; an emergency detention basin upstream of the flooded area to divert outflow before it enters the area; dredging and shaping of the canal between the basin and the pump to improve overall flow and pumps on the adjacent Miami River to keep the C-4 outflow from overwhelming the river discharge. Other components of the initiative include drainage projects in the C-4 basin municipalities and unincorporated areas of the county.



The Tamiami Canal (C-4) Forward Pump



The forward pump on the C-4 or Tamiami Canal at Structure S25B is designed to push water flow downstream against the incoming tide thus allowing the system to continuously drain. It is actually three 54" pumps that together pump 600 cfi (cubic feet per second), which equals 4,500 gallons per second. This pump is the first element in the C-4 Basin Initiative and was constructed at a cost of \$3,400,000 through the Hazard Mitigation Grant Program funded by FEMA-1345-DR-FL, the October 2000 "No-Name" storm.



The Miami River Forward Pump



The forward pump at S-26 on the Miami River (C-6) is designed to counter the effects of the forward pump on the C-4 and prevent the C-4 Canal outflow from overwhelming the river thus causing flooding up-river. This pump, which also moves 600 cfi, is the second element in the C-4 Basin Initiative and was constructed at a cost of \$5,200,000 through the Hazard Mitigation Grant Program funded by FEMA-1345-DR-FL.



The Emergency Detention Basin



Pictured is the main pump station at the C-4 emergency detention basin (EDB). The EDB is made up of two reservoirs of nearly 500 acres each, which allows for approximately 4,000 acre/feet of water to be diverted from the C-4, which, in turn, creates increased holding capacity in the downstream section of the canal. The EDB is one more element in the C-4 Basin Initiative costing \$5,500,000 from the Hazard Mitigation Grant Program, FEMA-1345-DR-FL.



The EDB Supply Canal



The supply canal is the link between the emergency detention basin and the C-4 Canal. The supply canal and the access bridge were built at a cost of \$3,700,000 and were funded by the Hazard Mitigation Grant Program from FEMA-1345-DR-FL. An item of interest is that the bend in the supply canal at the point it enters the C-4 is to avoid an ancient Indian midden and burial ground.



The Miccosukee Tribe of Indians of Florida



The Miccosukee Indian Reservation is located in the C-4 Basin but upstream of the initiative improvements. To compensate, these large trailer mounted pumps were purchased at a cost of \$100,000 and, when needed, are placed in strategic locations to reduce flooding. Funding is through the Hazard Mitigation Grant Program from FEMA-1345-DR-FL.



The Sweetwater Berm



In the mid-1980's, the widening of U.S. 41, the Tamiami Trail, raised the elevation of the south bank of the C-4 or Tamiami Canal, which, in turn, caused an uneven distribution of floodwaters. This berm was constructed to bring the north bank back even with the south bank. A linear park with benches, a gazebo and a vitae course was added to enhance the project. This is another element in the C-4 Basin Initiative and was constructed at a cost of \$967,000 through the Hazard Mitigation Grant Program funded by FEMA-1345-DR-FL.



Storm Water Control



Most of the time, in Miami-Dade County, when you see these curb cuts what you have is a ground water recharge system, more commonly called a French drain. The photos below show you what's underground. In 1998, Miami-Dade County passed a \$70 million bond issue named QNIP, the **Quality Neighborhoods Improvement Program**, most of which was to relieve neighborhood flooding. Many QNIP dollars were used as project or global match for the C-4 Basin Initiative.



Uninstalled Curb Cuts



Curb Cuts



Perforated Pipe



A Manhole

Other Mitigation Measures

While window protection for windstorm and flood protection account for the bulk of the mitigation dollars spent in Miami-Dade County, they are by no means the only mitigation measures that are considered.

It should be noted that many projects are sponsored by agencies other than FEMA. There are dune restoration projects and flood related studies in progress in Miami-Dade County that are funded through the NOAA Coastal Impact Assistance Program. Mitigation measures along the Intercoastal Waterway have been funded through the Florida Inland Navigation District. Wildfire mitigation through controlled or prescribed burns is sponsored by The Nature Conservancy, Florida Division of Forestry and the National Park Service.



Proper Tree Trimming



Local Mitigation Strategy partners **Miami-Dade County Cooperative Extension Service** and the **University of Florida's** Institute of Food and Agricultural Sciences sponsor annual training classes for arborists and park and public works specialists in the proper way to prune trees for hurricane survival. Held annually since the year 2000, this program is presented in cooperation with the Miami-Dade Office of Emergency Management and the Local Mitigation Strategy Working Group.

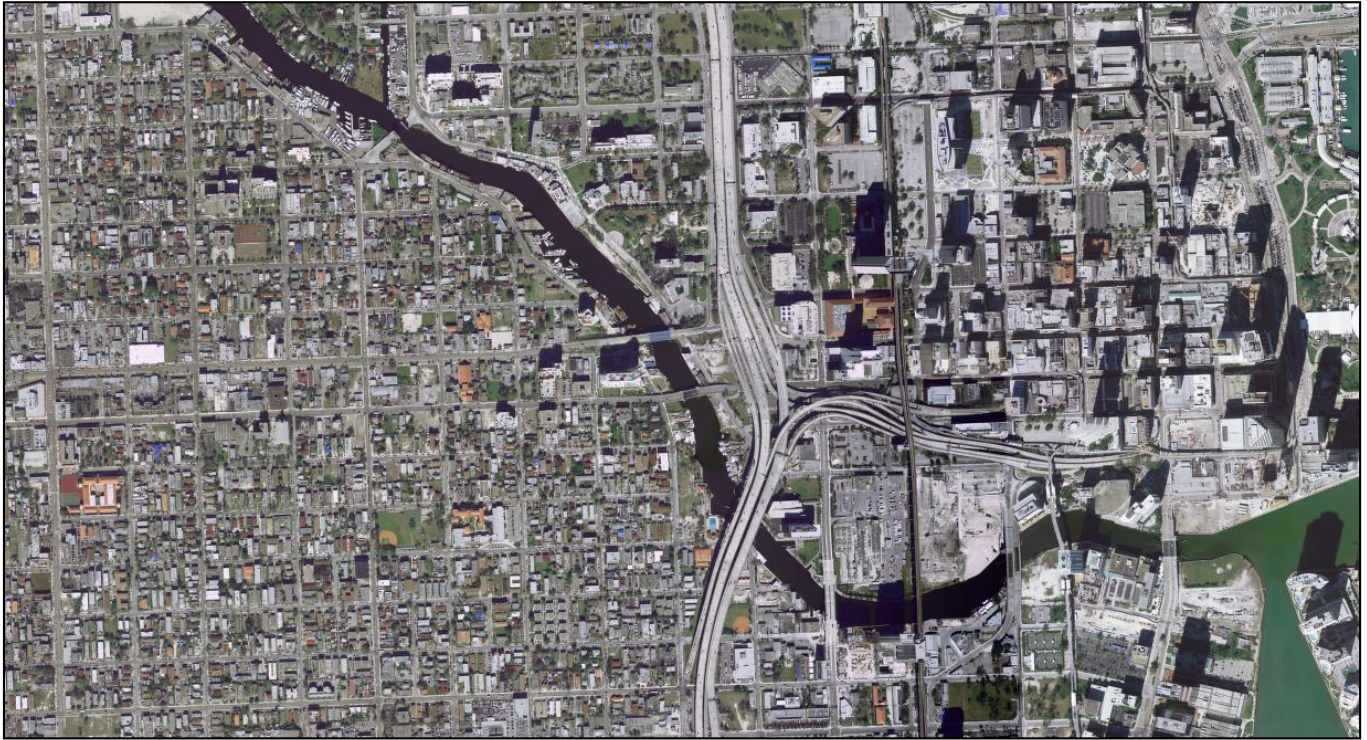


Before



After

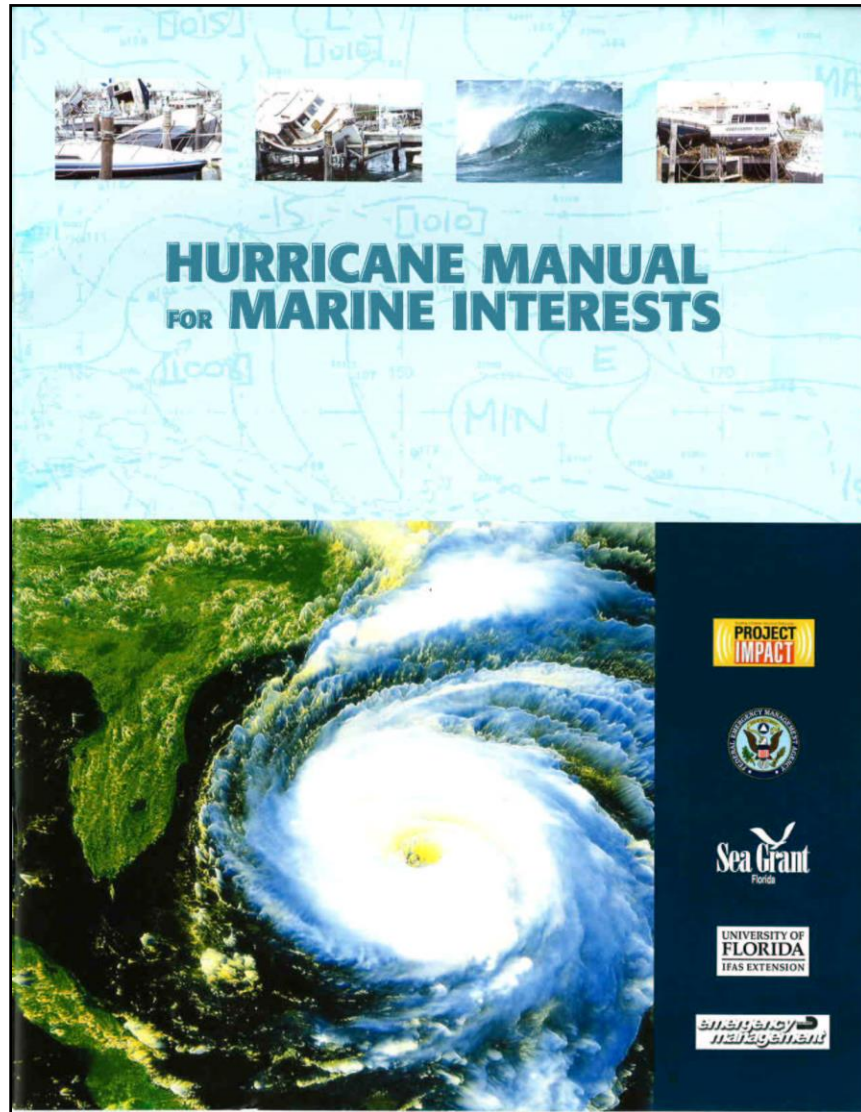
Miami River



Community Benefit Issue Request (CBIR) from FY 2005, FY 2006 and FY2007 was used to dredge the Miami River shipping channel. \$6,800,000 was funded for the federal channel and \$5,200,000 for the non-federal or that part of the river to either side of the federal channel.



Hurricane Manual for Boaters



This *Hurricane Manual for Marine Interests* was developed through the Florida Sea Grant program, a member of the Local Mitigation Strategy Working Group. It explains the proper ways to prepare boats for hurricanes and teaches marine safety for before, during and after a storm. The manual was funded through FEMA's Project Impact.



Terrorism Mitigation



The terrorism mitigation committee of the Local Mitigation Strategy concluded that the best way to fight terrorism is through the education of our children. This game, Home Free USA, was developed as a way to get the kid's attention. It's based on the federal security color chart and asks the student different questions about terrorism. Correct answers advance the player until he or she is "Home Free." They are then taught what terrorism is, what it is not, and to be aware of terrorism without living in fear of it. Initially, a two-week social studies module has been devised and successfully tested in several schools.

Partnerships



The Local Mitigation Strategy of Miami-Dade County promotes partnerships and works with many other agencies and organizations to promote mitigation activities. The members of the LMS Working Group come from our municipalities, our county departments, our colleges and universities, our public and private schools, our service organizations, our faith based community and our private sector companies and corporations. There are, on average, over one hundred people and over sixty organizations represented at any given meeting of the Local Mitigation Strategy Working Group.

In some of the partnerships, the Local Mitigation Strategy is directly involved in coordinating efforts or funding measures or inter-organizational liaison and other such activities. In other cases, such as the National Flood Insurance Program's Community Rating System or the High Velocity Hurricane Zone section of the Florida Building Code, the LMS supports the effort but is not directly involved in the activities.

Disaster Resistant Universities



In 2001, the Federal Emergency Management Agency initiated the Disaster Resistant Universities(DRU) program and the University of Miami (above) was one of the charter members in the program and hosted the first DRU conference. In 2004, Florida International University entered into the program, as well. The program encourages colleges and universities nationwide to become active participants in hazard mitigation. In Miami-Dade County, the University of Miami and FIU are joined by St. Thomas University, Miami Dade College, Florida Atlantic University, Florida Memorial University, Johnson & Wales University, Barry University and the University of Florida as active participants in the Local Mitigation Strategy.

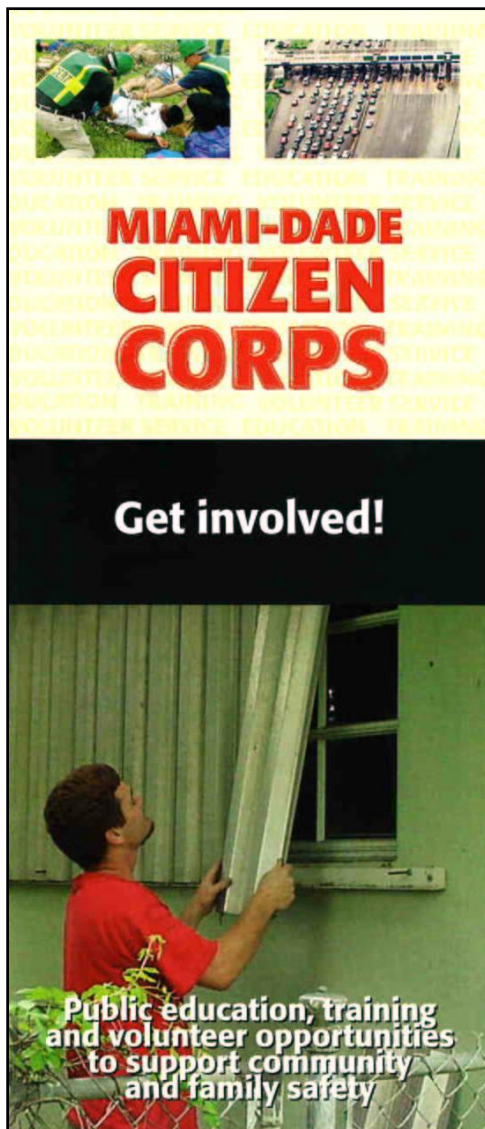


Alternate Spring Break

This program gives college students a way to spend their spring break doing service to the community. In Miami-Dade County, The American Red Cross of Greater Miami and the Keys, Americorps, the Community Action Agency and the Miami-Dade Office of Emergency Management, all partners in the Local Mitigation Strategy, have brought the students here to install hurricane shutters on the homes of low-income elderly residents.



Miami-Dade Citizen Corps



The Local Mitigation Strategy works to develop the Miami-Dade Citizen Corps and all its components. While some components are more fully developed than others, all will help put Miami-Dade in the forefront of the Citizen Corps national effort. The Citizen Corps brochure pictured above was funded by the Local Mitigation Strategy and Project Impact.

Miami-Dade CERT Teams



The Local Mitigation Strategy works with the Miami-Dade Community Emergency Response Teams and provided the funding to purchase equipment for low-income teams and to print the CERT brochure. Miami-Dade's CERT program is a national leader with close to 1,500 team members trained.

Hurricane Expo



The Home Depot and **Miami-Dade Fire Rescue help**



Insurance Commissioner
Tom Gallagher helps



Miami-Dade Fire Rescue
Air Rescue helps

Sponsored By
Federal Alliance for Safe Homes
The Home Depot
Miami-Dade
Office

of

Emergency

Management

StormReady County



Jim Lushine, left, of the National Weather Service's (NWS) Miami Forecast Office presents the *StormReady* County sign to Frank Reddish, the LMS coordinator and Chuck Lanza, director of Miami-Dade Emergency Management. The NOAA and the National Weather Service have set down certain standards that must be met for a community to earn the right to call itself a *StormReady* Community.



In 2008, Rob Molleda, left, of the NWS Miami Forecast Office, with LMS coordinator Frank Reddish and Emergency Management director Doug Bass, extends *StormReady* status for Miami-Dade County through the year 2011. Miami-Dade County was re-designated a *StormReady* Community in 2011-2013.

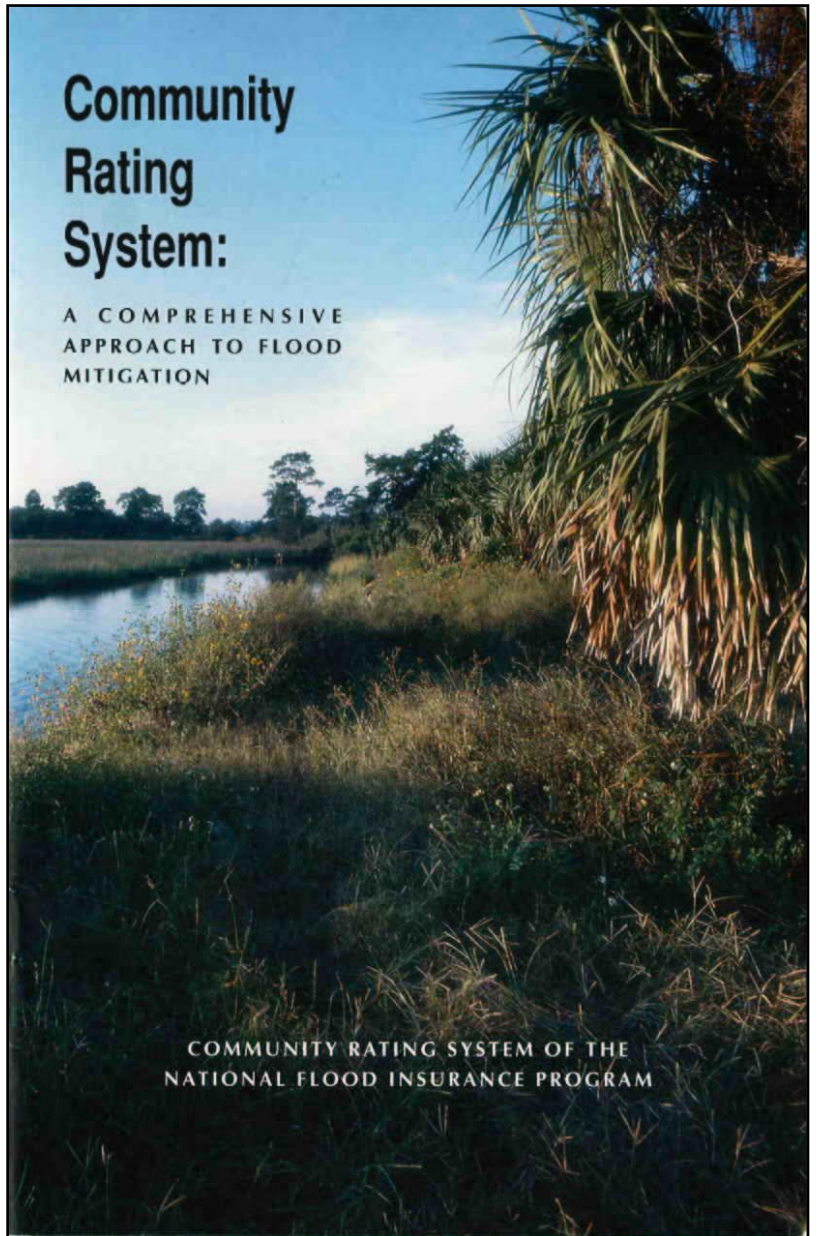
Miami-Dade was renewed as a *StormReady* Community again in 2014.



National Flood Insurance Program

Miami-Dade County has a CRS rating of 5 and strives to have every municipality within the county take part in the

Community Rating System

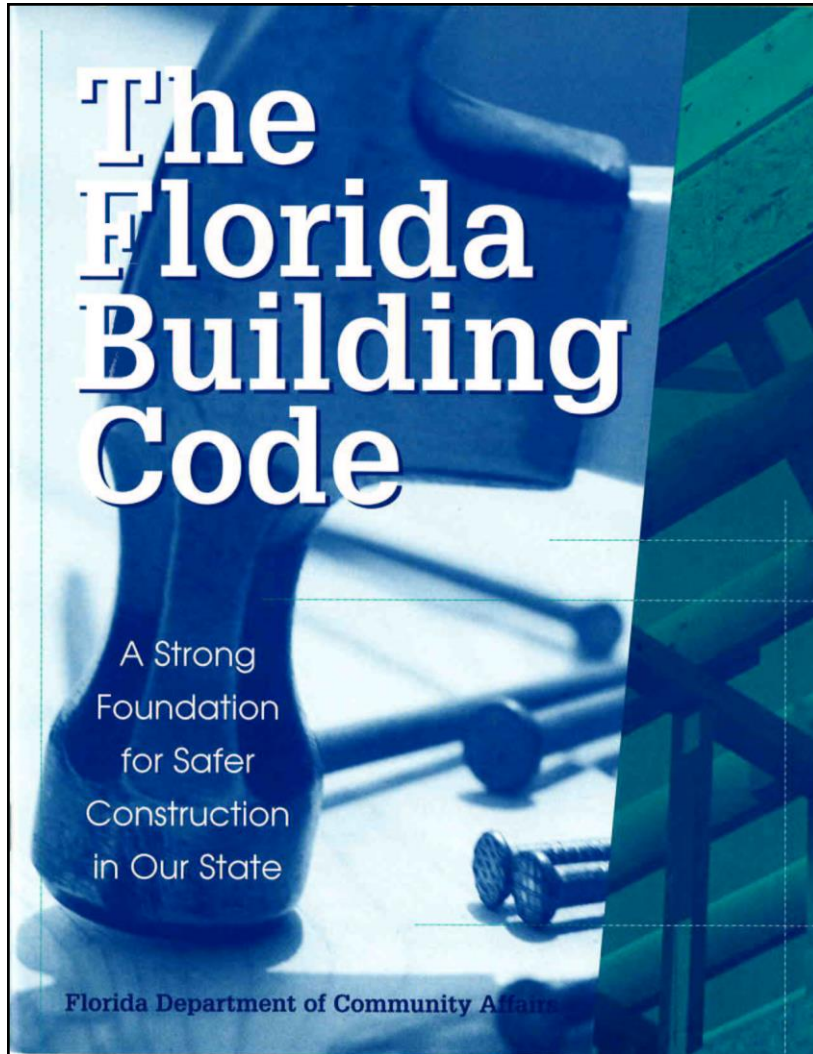


The Local Mitigation Strategy and the Department of Environment Resources Management



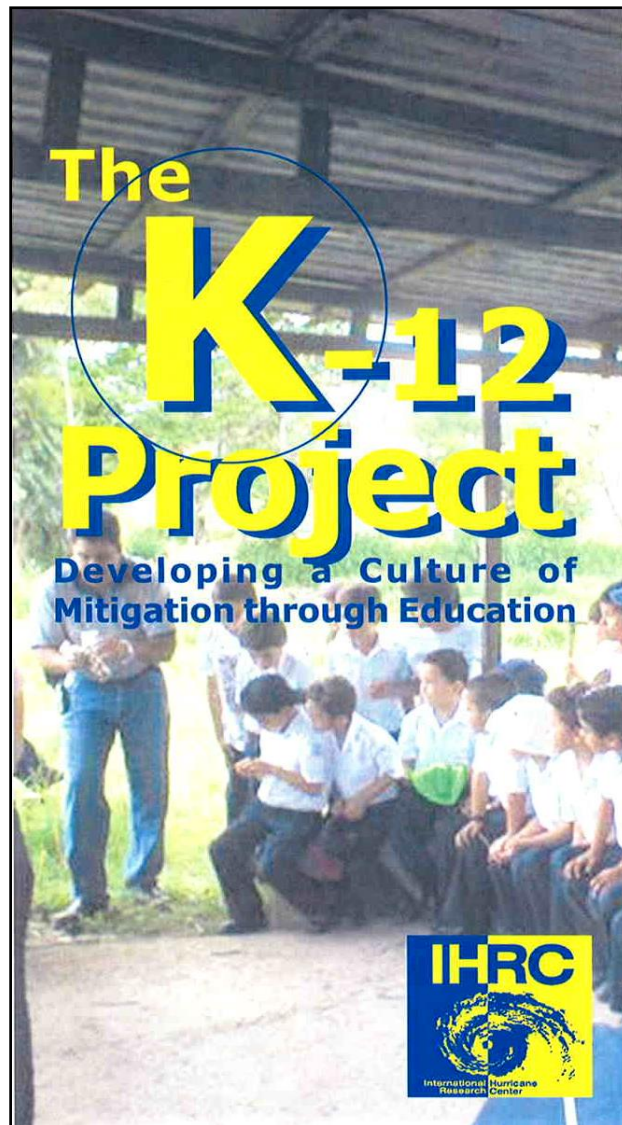
NATIONAL
FLOOD
INSURANCE
PROGRAM

The Florida Building code



The strong elements of the *South Florida Building Code* were retained in the new *Florida Building Code* as the “High Velocity Hurricane Zone” section of the code. Miami-Dade Building Department and the Miami-Dade Building Code Compliance Office (BCCO) led the effort to keep these strict standards in our county. For this effort, the Miami-Dade Building Code Compliance Office was awarded the national award for mitigation at the National Hurricane Conference in New Orleans in 2003. BCCO is a long-standing partner in the Local Mitigation Strategy.

International Hurricane Research Center



The International Hurricane Research Center at Florida International University is a charter member of the Local Mitigation Strategy Working Group. The K-12 Project is designed to take the concept of mitigation to schoolchildren. The program consists of a series of workshops for teachers as well as mitigation expositions in schools.

Save a Life!



Miami-Dade County has many lakes and canals and at least once a week a vehicle plunges into one, often costing lives. The life-saving tool pictured above combines a seat belt cutter, a flashlight and a center punch to break the vehicle window and escape. These devices are distributed by the Miami-Dade Office of Emergency Management and were funded through the Miami-Dade Local Mitigation Strategy and Project Impact.

The Ring Shank Nail



Professor Ricardo Alvarez and his research and development team at Florida International University recognized that the ring shank nail combined the lift resistance of screws with the shear strength of regular nails. Wind testing confirmed this and now use of the ring shank nail is included in the Florida Building Code and is required for roof installations throughout the High Velocity Hurricane Zone. Mr. Alvarez and FIU are charter members of the Miami-Dade Local Mitigation Strategy Working Group.

2013 Projects Reported as Completed

In 2013 Miami-Dade LMS began tracking projects utilizing a new online system. In order to transition the list all projects that were in the 2012 Project list were transitioned to a spreadsheet and all stakeholders were asked to review, update and provide additional information. The result was an increased number of projects being reported as completed, even though some of them may have been done in previous years.

The list provided here is of projects that were reported as completed by December 2013. The LMS Chair will continue to work on the archiving process and also try to identify more historical projects.

Local Mitigation Strategy Project Status Reported 2013	
Completed Projects	
Florida International University – Public Safety Code Plus Building Construction	750,000.00
Housing Authority of City of Miami Beach - Windstorm Protection for Rebecca Towers South	755,640.00
Housing Authority of City of Miami Beach - Housing Authority of City of Miami Beach North	755,640.00
Housing Authority of City of Miami Beach - Shutter 211 Collins	150,000.00
Housing Authority of City of Miami Beach - Replace Generator, Rebecca Towers South	100,000.00
Housing Authority of City of Miami Beach - Replace Generator, Rebecca Towers North	100,000.00
Miami Dade College – North Campus Building 1000 – Hurricane Shutters	374,200.00
Miami Dade College – Wolfson Campus Building 2000 – Hurricane Protection	200,000.00
Miami Dade Libraries – South Miami Repair Roofing System	250,000.00
Miami Dade Public Housing and Community Development – Claude Pepper- Wind Mitigation	1,013,336.00
Miami Dade Public Housing and Community Development –Peters Plaza - Wind Mitigation	401,751.00
Miami Dade Public Housing and Community Development – Kline Nunn – Wind Mitigation	1,051,693.00
Miami Dade Public Housing and Community Development –Newberg - Wind Mitigation	1,000,000.00
University of Miami - Multiple Building Gables – Wind Mitigation	1,000,000.00
University of Miami - Multiple Building Medical – Wind Mitigation	2,900,000.00
University of Miami - Marine Campus SLAB – Wind Mitigation	302,000.00
University of Miami – Multiple Building Medical – Wind Mitigation	2,950,000.00
University of Miami - Multiple Building Marine - Wind Mitigation	466,900.00
University of Miami - Multiple Building Gables - Wind Mitigation	1,800,000.00

Local Mitigation Strategy Project Status Reported 2013	
University of Miami – Bascom Palmer Eye Institute – Wind Mitigation	3,400,000.00
Cutler Bay – Town Hall EOC Installation of Transfer Switch for Emergency Power	210,000.00
Cutler Bay – Acquisition of Emergency Generators Town Hall	394,000.00
Cutler Bay – Acquisition of Emergency Generators – Police Department	
Cutler Bay – Acquisition of Emergency Generators - Traffic Signals	
Key Biscayne - Stormwater Master Plan Update	150,000.00
Key Biscayne – Ocean Lane Drive – Drainage Wells	465,000.00
Miami Springs - Stormwater Master Plan	2,300,000.00
Miami Springs – Basin 14 – Drainage	654,480.00
Miami Springs – Basin 13 – Drainage	91,125.00
Miami Springs - Basin 19B – Drainage	364,500.00
Miami Springs – Basin 9 – Drainage	457,313.00
Miami Springs – Basin 25 – Drainage	747,225.00
Miami Springs - Shutters for Municipal Buildings	30,000.00
Miami Springs – Emergency Generator for Senior Center	350,000.00
Miami Springs – Storm Sewer Cleaning Program Improvements	350,000.00
Miami Gardens – Drainage Improvements NW 38 Court	121,000.00
Miami Gardens – Drainage Improvement NW 7 Ave Improvements new roads, drainage and median	5,200,000.00
Miami Gardens – Drainage Improvement NW 27 Ave and 207 Street	634,885.00
Miami Gardens – Venetian Gardens Drainage and Road Improvement NW 161 - 164 Street and 37-38 Place	315,800.00
Miami Gardens Secondary Canal Bank Stabilization and Sediment Removal Carol City Canals A and B, Real Site Canal and NW 17 Avenue Canal	1,300,000.00
Miami Gardens – Vista Verde Phase IA Area from NW 38-39 Avenue and NW 40 Ave Rd to NW 207 Street	670,885.70
Miami Gardens – Emergency Broadcast System	271,000.00
Miami Gardens - NW 191-193 Streets, 9 th Ave – 10 th Place – Drainage	233,752.00
Miami Gardens – NW 158-159 Street and NW 28 Place – 29 Court – Drainage	145,329.00
Miami Gardens – NW 194 Street and 21 Ave – Drainage	350,000.00
Miami Gardens – NW 175 Street and 12 Ave – Drainage	113,200.00
Miami Gardens – NW 38 Place and NW 208-209 Streets – Drainage	150,977.00
Miami Gardens - Bunche Park Neighborhood Revitalization Project	325,000.00
Miami Gardens – King's Garden Phases I and II – Drainage	480,000.00
Miami Gardens – NW 171 Terrace from NW 44 Avenue to 45 Court – Drainage	225,000.00
Miami Gardens – Golden Glades Elementary School Swale Restoration	32,098.60
Miami Gardens – NW 17 Avenue and 194 Street Swale Restoration	3,500.00

Local Mitigation Strategy Project Status Reported 2013	
Miami Gardens – NW 159 Drive and 12 Ave, East Swale Restoration	2,758.00
Miami Gardens - 441 From County Line South 100 feet – Drainage	68,700.00
Miami Gardens – NW 211 Street and 29 Court/30 Avenue, Inlets and Swale Restoration	30,000.00
Miami Gardens – NW 38 Court and 185 Street, Inlets and Swale Restoration	20,000.00
Miami Gardens – NW 167 and Palmetto East Ramp Road at NW 12 Avenue – Drainage and road improvements	366,070.00
Palmetto Bay -0 Drainage Improvements for Sub-Basin #10	790,000.00
Under Construction	
Jackson - Wind Retrofit Project at RTC	8,589,588.00
Jackson - Wind Retrofit Project at JRSC	601,281.00
Miami –Dade Public Works and Waste Management - Beach and Dune Restoration and Maintenance	3,200,000.00
Miami –Dade Public Works and Waste Management – 32 nd Street Breakwater Rehabilitation and Stabilization	800,000.00
Miami –Dade Public Works and Waste Management – 55 th Street Erosion Control Breakwater	1,700,000.00
Miami Dade College – Medical Center Building 1000 – Hurricane Shutters	200,000.00
Miami Dade College – Medical Center Building 2000 – Hurricane Protection	263,000.00
Miami Dade College – Hialeah Campus Building 1000 – Hurricane Protection	250,000.00
University of Miami - U of M Hospital – Wind Mitigation	4,100,000.00
Key Biscayne – Stormwater Outfall Rehabilitation -	50,000.00
Miami Lakes – Downtown Area Drainage Improvements	1,000,000.00
Miami Springs - Removal of Australian Pines – Wind Mitigation	14,000.00
El Portal – Stormwater Improvements	5,000,000.00
Palmetto Bay – Localized Drainage Improvements	900,000.00
Funded - Not Yet Started	
Jackson – Tank Farm Enclosure at JMH	498,420.99
Miami Dade Public Housing and Community Development – Haley Sofge Towers – Hurricane Shutters – Phase 1	1,000,000.00
Miami Dade Public Housing and Community Development – Haley Sofge Towers – Hurricane Shutters – Phase 2	1,000,000.00
Miami Dade Public Housing and Community Development – Ward Towers	1,000,000.00
Florida City – Rehabilitation of Friendland Manor Drainage System	192,000.00
Key Biscayne – Flap Gates at Outfalls – Drainage	626,700.00
Key Biscayne – Drainage Improvements on Fernwood Road and Hampton Road	465,275.00
Pinecrest – Purchase of Portable Two – Way Radios – Communications Redundancy	110,000.00

Local Mitigation Strategy Project Status Reported 2013	
Pinecrest – Improvements to Pinecrest Gardens Banyan Bowl – Structural	50,000.00
Pinecrest – Improvements to Pinecrest Gardens Lower Garden - Dredging	30,000.00
Total Projects	
82 Projects	\$69,775,023.29

2014 Projects Reported as Completed

Local Mitigation Strategy Project Status Reported 12/2013-12/2014		
Completed Projects		
Baptist Health	South Miami Hospital Structure Enhancement	7,000,000.00
Cutler Bay	Old Cutler Road JPA	7,524,319.00
Cutler Bay	SW 216th Street and SW 97th Ave Traffic Circle	204,486.00
Cutler Bay	SW 97th Ave Drainage Improvement	291,494.00
Cutler Bay	Development of Floodplain Management Plan	120,000.00
Jackson	Wind Retrofit Project at JRSC	601,281.00
Key Biscayne	Village Hall Courtyard Improvement Demonstration Project	16,500.00
Miami Beach	Belle Island Outfall Replacement	374,000.00
Miami Beach	Sunset Islands I & II Drainage Improvements	1,916,000.00
Miami Beach	Star Island Drainage Improvements	703,000.00
Miami Beach	South Point II Drainage Improvements	2,000,000.00
Miami Beach	City Center - Historic District Drainage Improvements	2,800,000.00
Miami Beach	Parkview Canal Seawall Revetment	1,800,000.00
Miami Beach	Biscayne Point Drainage Improvements	6,600,000.00
Miami Beach	Lake Pancoast Area Drainage Improvements	1,600,000.00
Miami Beach	Regional Communication/Command Van	500,000.00
Miami Gardens	Drainage Improvement 151-159 Street and 27-32 Ave	258,500.00
Miami Gardens	NW 171 Terrace from NW 44 Avenue to 45 Court	225,000.00
Miami Gardens	Drainage Improvement NW 9 Ave., along NW 183- 185 Dr. to NW 7th Ave	17,000.00
Miami Gardens	NW 178 Drive and 42-47 Avenues Outfall repairs and restoration	102,000.00
Miami Gardens	Correct Stormwater Utility Fees for Commercial Properties	0.00
Miami Gardens	Vista Verde Phase 1b area along NW 39 Aven from 207-209 St	425,000.00
Miami Gardens	Bridge Replacement	930,000.00
Miami Lakes	Downtown Area Drainage Improvements	1,000,000.00
Miami Lakes	NW 154th Street Widening from 83rd to 89th Avenues	1,700,000.00
Miami Springs	Purchase and Install a Radio Repeater System	45,000.00
North Miami Beach	NE 161 Street Drainage Improvement	350,000.00
North Miami	Embankment stabilization at Keystone Point Bridge #2	1,800,000.00
North Miami	Global Positioning System	12,000.00
North Miami	Security for City Hall	62,750.00
Pinecrest	Improvements to Pinecrest Gardens Banyan Bowl	50,000.00
Pinecrest	Improvements to Pinecrest Gardens Lower Garden	30,000.00
Pinecrest	Improvements to Pinecrest Gardens Generator	5,000.00
Public Housing and Community Development	Newberg Windstorm Protection	1,923,900.00

Local Mitigation Strategy Project Status Reported 12/2013-12/2014		
Public Housing and Community Development	Claude Pepper Windstorm Protection	862,095.00
Public Housing and Community Development	Jack Orr Plaza Windstorm Protection	900,000.00
Public Housing and Community Development	Joe Moretti Plaza Windstorm Protection	2,592,000.00
Public Housing and Community Development	Dante Fascell Windstorm Protection	422,800.00
South Miami	Dorn Avenue Drainage Improvements	200,000.00
Completed Total	# of Projects: 39	\$ 47,970,125.00
Under Construction		
El Portal	Village of El Portal Stormwater Improvements	5,000,000.00
Coral Gables	Fire Station #3 Hurricane shutters	88,000.00
Cutler Bay	Caribbean Boulevard JPA Project and Gap 1	11,173,054.00
Cutler Bay	Flood Zone Data GIS System	140,000.00
Cutler Bay	SW 212 th Street	390,000.00
Hialeah	Roadway/Stormwater Improvements	**
Homestead	Sidewalks/ Roadway Improvements	200,000.00
Homestead	Upgrade OCB's (Oil Circuit Breakers) with VCB's (Vacuum Circuit Breakers)	200,000.00
Jackson	Wind Retrofit Project at RTC	8,589,588.00
Key Biscayne	Traffic Signage & Pavement Marking Improvements Master plan	40,000.00
Key Biscayne	Stormwater outfall Rehabilitation	50,000.00
Key Biscayne	Comprehensive Review of Local Laws and Regulations	5,000.00
Miami Dade College	Hialeah Campus, bldg 1000	250,000.00
Miami Dade College	Medical Cntr, bldg 2000	263,000.00
Miami Dade College	Medical Cntr, bldg 1000	200,000.00
Miami Gardens	Create GIS Layer for Storm Sewer Infrastructure	100,000.00
Miami Springs	Removal of Australian Pines	14,000.00
Mount Sinai	Protect Critical Services	2,000,000.00
North Miami	Sanitary Sewer Backup	700,000.00
North Miami	Flood Prevention and Mitigation: Drainage Basin13	500,000.00
North Miami	Surge Resistance and Flood Mitigation at Keystone Point and Sans Souci	500,000.00
North Miami Beach	Install Additional Storm Water Basins or Increase Existing Basins	60,000.00
North Miami Beach	Construct Storm Water System that may include Injection Wells in Areas Prone to Flooding	120,000.00

Local Mitigation Strategy Project Status Reported 12/2013-12/2014		
North Miami Beach	Clean and Improve Drainage Systems	428,400.00
North Miami Beach	Miami Industrial District Drainage and Roadway Improvement	800,000.00
North Miami Beach	Eastern Shores Drainage Repair/Replacement	450,000.00
North Miami Beach	Renovation of Eastern Shores Outfall Pipes	550,000.00
North Miami Beach	NE 172nd Street Drainage Improvement	1,791,692.00
Palmetto Bay	Flood Zone Data Maintenance: GIS System	100,000.00
Palmetto Bay	Localized Drainage Improvements	900,000.00
Public Housing and Community Development	Haley Sofge Towers Windstorm Protection	2,056,321.00
Public Housing and Community Development	Haley Sofge Towers Window Replacement and Repair Concrete	1,000,000.00
Public Housing and Community Development	Ward Tower Windstorm Protection	1,9240,000.00
Public Works and Waste Management	55th Street Erosion Control Breakwater	1,700,000.00
Public Works and Waste Management	32nd Street Breakwater Rehabilitation and Stabilization	800,000.00
Public Works and Waste Management	Beach and Dune Restoration and Maintenance	3,200,000.00
Seaport	Construction of New Seawall - Area 2	8,276,607.00
University of Miami	U of Miami Hospital	4,100,000.00
Under Construction Total	# of Projects: 39	\$ 75,975,662.00
Funded - Not Yet Started		
Cutler Bay (joint project with Miami-Dade PWWM)	Caribbean Boulevard Bridge Project	3,000,000.00
Doral	Installation of Transfer Switch for Emergency Power	50,000.00
Doral	Stormwater Improvements 5-Year CIP Year 2	1,017,150.00
Doral	NW 33 Street from NW 82 Avenue to NW 79 Avenue Roadway Improvements	1,600,000.00
Florida City	Rehabilitation of Friendland Manor Drainage System	192,000.00
Key Biscayne	Coastal Dune Vegetation	10,000.00
Key Biscayne	Flap Gates at Outfalls	626,700.00
Key Biscayne	Drainage Improvements on Fernwood Road & Hampton Road	465,275.00
Key Biscayne	New Stormwater Outfall Construction	210,000.00
Mount Sinai	Code Plus Construction Enhancements New Medical Office Tower	3,750,000.00
Mount Sinai	Protect the Power Supply	5,000,000.00

Local Mitigation Strategy Project Status Reported 12/2013-12/2014		
Mount Sinai	Code Plus Construction Energy Center Facility Protect Redundant Power Supply	250,000.00
North Miami Beach	Dead End Eliminations	42,000.00
North Miami Beach	Drainage in Alleyways	50,000.00
North Miami Beach	Leak Detection Services	50,000.00
North Miami Beach	Storm Water Pump Replacement Program	50,000.00
North Miami Beach	Force Main Installations and Lift Stations Rehabilitations	125,000.00
North Miami Beach	Pump Replacements	165,000.00
North Miami Beach	Inflow and Infiltration Prevention	250,000.00
North Miami Beach	Fire Flow Improvements	320,000.00
North Miami Beach	Trenchless Pipe Replacements	325,000.00
North Miami Beach	Roadway Improvements	327,000.00
North Miami Beach	Storm Water Improvement City-Wide	336,885.00
North Miami Beach	Aerial Pipe Crossings	350,000.00
Pinecrest	Purchase of Portable Two-Way Radios	110,000.00
Public Housing and Community Development	Dante Fascell	422,800.00
Public Housing and Community Development	Haley Sofge Towers	2,056,321.00
Public Housing and Community Development	Ward Tower	1,920,400.00
Public Works and Waste Management	SW 157 AVE Canal Interconnect	1,003,311.98
Public Works and Waste Management	NE 149 Street, from NE 10 Ave to NE 14 Ave	340,000.00
Public Works and Waste Management	Larchmont Gardens Pump Station	1,671,841.00
Public Works and Waste Management	NE 6 AVE& NE 185 Street; NE Miami CT, from NE 196-198 ST; NW 22 AVE & NW 175 ST; North DR & NE 14 AVE	835,000.00
Public Works and Waste Management	Seaboard Acres Pump Station	1,500,000.00
Public Works and Waste Management	NW 19 Avenue and NW 84 Street	120,000.00
Public Works and Waste Management	NW 39 Street and NW 25 Avenue	130,000.00
Funded - Not Yet Started	# of Projects: 35	\$28,671,683.98
Total Projects	113	\$ 152,617,470.98

** Project estimates were not available at time document went to print.

2015 Projects Reported as Completed

Local Mitigation Strategy Project Status Reported 01/2015-12/31/2015			
Completed Projects			Funding Source
Aventura	NE 29 Place Phase 1 drainage work	425,000.00	FDEP
Cutler Bay	Caribbean Boulevard JPA project reduce flooding and increase traffic flow	11,173,054.00	CITT funds
Cutler Bay	SW 212 Street Drainage Improvements from SW 87 Ave to SW 85 Ave	850,000.00	TAP & FL Leg. Approp. Grant
Emergency Management	Arnold Hall South Engineering Study	50,000.00	State Shelter Retrofit
Emergency Management	Reilly Coliseum Engineering Study	50,000.00	State Shelter Retrofit
Emergency Management	Edwards Hall Engineering Study	50,000.00	State Shelter Retrofit
Emergency Management	Arnold and Edwards Connector Hall Engineering Study	50,000.00	State Shelter Retrofit
Emergency Management	Arnold Hall North Engineering Study	50,000.00	State Shelter Retrofit
Florida City	Generator for Underground Drainage for Friedland Manor	904,739.00	State Small City CDBG and City Funds
Homestead	EOC equipment to support activations	450,000.00	Capital Improvement
Homestead	Land acquisition for storm water drainage	3,000,000.00	Capital Improvement
Homestead	Retrofit of City Hall and EOC to Category 5 hurricanes.	3,958,500.00	HMGP, EOC Grant, General Fund
Homestead	Emergency generators for EOC	58,382.00	New City Hall Building fund
Key Biscayne	Erosion Control Implementation	10,000.00	Public Works General fund
Key Biscayne	Stormwater outfall rehabilitation on Harbor Drive	150,000.00	Stormwater Utility and grant
Miami	Training Center and back up EOC Elevator refurbishment	150,000.00	PDM
Miami	Brennan Channel marker replacement	65,000.00	*
Miami Dade College	Hialeah Campus installation of hurricane shutters/window protection Building 1000.	250,000.00	HMGP
Mount Sinai	Purchase twelve synchronized generators to protect patient power supply	5,000,000.00	Grants and Loans for Public Works and Development Facilities
Mount Sinai	Relocation of generators for energy facility into hurricane rated enclosure above storm surge	8,994,838.00	State DEM

Local Mitigation Strategy Project Status Reported 01/2015-12/31/2015			
Mount Sinai	Provide hurricane rated structures to protect power equipment and ensure connection to central energy plant	7,351,169.00	HMGP
Completed Projects continued			Funding Source
Seaport	Construction of New Seawall - Area 2	9,600,000.00	FDOT
Seaport	Storm Bollards	70,115.00	Seaport Funds
Seaport	Concrete Panels	619,858.00	Seaport Funds
Sweetwater	Stormwater Improvements Phase IIB North Project	1,600,000.00	US EPA, Miami Dade GOB
University of Miami	Hospital wind mitigation and roof tie downs	4,100,000.00	PDM
Completed Total	# of Projects: 26	\$58,960,540.00	
Under Construction			Funding Source
Bal Harbour	IT Enhancements to hardware, software and security.	170,800.00	Capital Improvement
Biscayne Park	New Municipal/Public Safety Building	856,000.00	Grant Awarded
Coral Gables	Fire Station #3 Hurricane shutters	88,000.00	Capital Improvement
Cutler Bay	Reduction of Floating Debris	60,000.00	Funding Secured
Cutler Bay	Portable Traffic Control Signs	200,000.00	Grant
Cutler Bay	Flood Zone Data GIS System	140,000.00	Stormwater Utility Fees
Cutler Bay	Municipal AM Emergency Radio Broadcast Station	85,000.00	Grant
Cutler Bay	Removal of Australian Pines and other Exotics	85,000.00	Town Budget
Cutler Bay	Emergency Portable Air Conditioner Units	120,000.00	Grant
El Portal	Village of El Portal Stormwater Improvements	10,000,000.00	Capital Improvement
Hialeah	Roadway/Stormwater Improvements (SE 4 ST to HIA DR from 6-8 AVE)	151,469.00	City Capital Improvement
Hialeah Gardens	Central District Drainage Improvements	2,500,000.00	Capital Improvement
Homestead	Upgrade OCB's (Oil Circuit Breakers) with VCB's (Vacuum Circuit Breakers)	150,000.00	Capital Improvement
Homestead	Improve Transportation Infrastructure	2,000,000.00	Miami-Dade County Roads and State of Florida Roads
Homestead	Wastewater Infiltration/Inflow	2,400,000.00	Capital Improvement
Homestead	Sidewalks/ Roadway Improvements	200,000.00	Capital Improvement Plan
Homestead	Improvements to Existing Buildings	500,000.00	Capital Improvement
Homestead	New Sewer Mains	2,000,000.00	Capital

Local Mitigation Strategy Project Status Reported 01/2015-12/31/2015			
			Improvement
Homestead	Sewer lines in the Northwest Neighborhood and the West Industrial Area	3,300,000.00	Capital Improvement
Homestead	Installation of storm shutters and/or Impact Resistant Windows at different locations	1,000,000.00	Capital Improvement
Homestead	Police Station Security/Hardening	50,000.00	Bond Issue
Under Construction continued			Funding Source
Homestead	City Hall Security Enhancement	60,000.00	New City Hall building fund
Homestead	Customer Service & Finance Security Enhancement	65,000.00	New City Hall Building Fund
Jackson	Wind Retrofit Project at RTC	8,589,588.00	FEMA Grant
Key Biscayne	Traffic Signage & Pavement Marking Improvements Master plan	40,000.00	Capital Improvement
Key Biscayne	Comprehensive Review of Local Laws and Regulations	5,000.00	Stormwater Utility Fund
Miami Beach	Venetian Islands Drainage Improvements	9,100,000.00	Grant Applied For
Miami Beach	Drainage Hot Spots	**	Grant
Miami Beach	Venetian Islands – Neighborhood Improvements	**	Grant
Miami Beach	Sunset Islands 3 & 4 – Neighborhood Improvements	**	Grant
Miami Beach	Lower North Bay Road – Neighborhood Improvements	**	Grant
Miami Beach	Citywide Dune Restoration & Enhancement Project	400,000.00	Grant
Miami Gardens	Create GIS Layer for Storm Sewer Infrastructure	100,000.00	*
Miami Springs	Removal of Australian Pines	14,000.00	Other Internal Funding
Mount Sinai	Code Plus Construction Enhancements Surgical Tower	6,500,000.00	FEMA
North Miami	Flood Prevention and Mitigation: Drainage Basin13	500,000.00	Capital Improvement
North Miami	Sanitary Sewer Backup	700,000.00	Capital Improvement
North Miami	Surge Resistance and Flood Mitigation at Keystone Point and Sans Souci	500,000.00	Capital Improvement
North Miami Beach	NE 172nd Drainage Improvement	17,916.92	Capital Improvement
North Miami Beach	Install Additional Storm Water Basins or Increase Existing Basins	60,000.00	Capital Improvement
North Miami Beach	Construct Storm Water System that may include Injection Wells in Areas Prone to Flooding	120,000.00	Capital Improvement
North Miami Beach	Clean and Improve Drainage Systems	428,400.00	Capital Improvement
North Miami Beach	Eastern Shores Drainage Repair/Replacement	450,000.00	Capital

Local Mitigation Strategy Project Status Reported 01/2015-12/31/2015			
			Improvement
Palmetto Bay	Flood Zone Data Maintenance: GIS System	100,000.00	Capital Improvement
Palmetto Bay	Localized Drainage Improvements	900,000.00	Capital Improvement
Public Housing And Community Development	Ward Tower	1,920,400.00	Capital Improvement
Under Construction continued			Funding Source
Public Housing and Community Development	Haley Sofge Towers	1,000,000.00	Capital Improvement
Public Housing and Community Development	Haley Sofge Towers	2,056,321.00	Capital Improvement
Sweetwater	South Florida Water Management District Flood Protection Berm	1,000,000.00	SFWMD
West Miami	Impact Resistant Windows for City Hall	52,000.00	CDBG
Under Construction Total	# of Projects: 50	\$ 60,732,894.92	
Funded - Not Yet Started			
MD Public Works	SW 157 AVE Canal Interconnect	**	Capital Improvement
Aventura	Stormwater Drainage Projects	**	Capital Improvement
Coral Gables	Basin Inflow and Infiltration Upgrade	1,179,793.00	Other Internal Funding
Cutler Bay	Preventive Pruning of Existing Town Tree Inventory	285,000.00	Budgeted F.Y. 2015 - 2016
Cutler Bay	Debris Removal	400,000.00	*
Cutler Bay	Storm Water Outfalls	500,000.00	Stormwater Utility Fund
Doral	Installation of Transfer Switch at Morgan Levy Park for Emergency Power	50,000.00	City General Fund
Doral	Stormwater Improvements 5-Year CIP: Year 2	1,017,150.00	State of Florida legislation
Doral	NW 33 St. from NW 82 Ave. to NW 79 Ave. Roadway Improvements	1,600,000.00	FDEP Grant
Hialeah	Roadway Reconstruction (W 8-10 Ave from W 31-33 Street)	1,625,000.00	Storm Sewer
Homestead	New Sewer Mains: To upgrade sewer main/lines to eliminate raw sewage from leaking into the water table.	2,000,000.00	City General Fund - Secured
Jackson	JMH Campus Wide Roof Replacement	2,500,000.00	CDBG
Jackson	Utility/Energy Center at JMH	5,290,000.00	Capital

Local Mitigation Strategy Project Status Reported 01/2015-12/31/2015			
			Improvement
Jackson	Emergency Switchgear Replacements at JNMC	6,950,000.00	Jackson's Bond Referendum 11/05/2013
Jackson	Volt Oil Switch Replacements	7,350,000.00	GOB 2005 & Jackson's Bond Referendum 11/05/2013
Key Biscayne	Coastal Dune Vegetation	10,000.00	Capital Improvement
Key Biscayne	New Stormwater Outfall Construction	210,000.00	Stormwater Improvement Fund
Funded - Not Yet Started continued			
Key Biscayne	Drainage Improvements on Fernwood Road & Hampton Road	465,275.00	Stormwater Utility Fund Capital Expenditures
Key Biscayne	Flap Gates at Outfalls (Backflow Prevention)	600,000.00	Other Internal Funding
MD Public Works	NW 19 Avenue and NW 84 Street	120,000.00	Internal Funding
MD Public Works	NW 39 Street and NW 25 Avenue	130,000.00	Internal Funding
MD Public Works	NE 6 AVE& NE 185 Street; NE Miami CT, from NE 196-198 ST; NW 22 AVE & NW 175 ST; North DR & NE 14 AVE	835,000.00	Stormwater Utility Capital Expenditures
MD Public Works	Seaboard Acres Pump Station	1,500,000.00	FDOT -
MD Public Works	Larchmont Gardens Pump Station	1,671,841.00	Other Internal Funding
MD Public Works	NE 149 Street, from NE 10 Ave to NE 14 Ave	340,000.00	
Mount Sinai	Code Plus Construction Energy Center Facility Protect Redundant Power Supply	250,000.00	Other Internal Funding
Mount Sinai	Code Plus Construction Enhancements New Medical Office Tower	3,750,000.00	Other Internal Funding
Mount Sinai	Elevate Seawall	7,000,000.00	Private and bond funding.
North Miami Beach	Dead End Eliminations	42,000.00	Capital Improvement
North Miami Beach	Drainage in Alleyways	50,000.00	Capital Improvement
North Miami Beach	Leak Detection Services	50,000.00	Capital Improvement
North Miami Beach	Storm Water Pump Replacement Program	50,000.00	Capital Improvement
North Miami Beach	Force Main Installations and Lift Stations Rehabilitations	125,000.00	Capital Improvement
North Miami Beach	Pump Replacements	165,000.00	Capital Improvement

Local Mitigation Strategy Project Status Reported 01/2015-12/31/2015			
North Miami Beach	Inflow and Infiltration Prevention	250,000.00	CIP Capital Improvement
North Miami Beach	Fire Flow Improvements	320,000.00	Capital Improvement
North Miami Beach	Trenchless Pipe Replacements	325,000.00	Capital Improvement
North Miami Beach	Roadway Improvements	327,000.00	Capital Improvement
North Miami Beach	Storm Water Improvement City-Wide	336,885.00	Capital Improvement
North Miami Beach	Aerial Pipe Crossings	350,000.00	Capital Improvement
Pinecrest	Purchase of Portable Two-Way Radios	110,000.00	Internal Funding
Virginia Gardens	VG - NW 40 street Stormwater Improvement Project	500,000.00	Other Internal Funding
Funded - Not Yet Started continued			
Virginia Gardens	VG - 66 avenue storm drain, ADA, and road widening project	650,000.00	Capital Improvement
Funded - Not Yet Started	# of Projects: 43	\$ 51,281,944.00	
Total Projects	129	\$ 170,975,378.92	

* Funding source not provided

** Project estimates were not available at time document went to print.

2016 Projects Reported as Completed

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
Completed Projects		Cost	Funding Source
Cutler Bay	SW 216th Street and SW 97th Ave Traffic Circle	204,486.00	Town
Homestead	New Sewer Mains	2,000,000.00	CIP
Homestead	Installation of storm shutters and/or Impact Resistant Windows at different locations	1,000,000.00	CIP
Homestead	Customer Service & Finance Security Enhancement	65,000.00	City Hall Build. Fund
Homestead	Portable mobile pumps	500,000.00	CIP
Homestead	Storm water telemetry system	900,000.00	CIP
Homestead	City Hall Security Enhancement	60,000.00	New City Hall building fund
Homestead	Secure three (3) existing water tanks from structural damage	600,000.00	CIP
Jackson	JMH Campus Wide Roof Replacement	2,500,000.00	Bond Referendum
Key Biscayne	Traffic Signage & Pavement Marking Improvements Master plan	40,000.00	CIP
Key Biscayne	Village K-8 Center Stormwater Pump Station	350,000.00	Stormwater Utility Fund
Miami	Training Center Elevator Refurbishment	150,000.00	PDM
Miami Beach	Lower North Bay Road – Neighborhood Improvements	14,000,000.00	City of Miami Beach
Miami Lakes	Lake Martha Drainage Improvements	1,260,000.00	Secured
Palmetto Bay	Drainage Improvements for Sub-Basin # 6	490,000.00	Stormwater Utility
Palmetto Bay	Drainage Improvements for Sub-Basin # 3	250,000.00	Stormwater Utility/ Grant
Palmetto Bay	Localized Drainage Improvements	900,000.00	Stormwater Utility/Grant
Palmetto Bay	Back-Up Generators and Transfer Switches	75,000.00	Special Rev. Funds
M-D Public Works	SW 82 Ave from Flagler to SW 2 St	109,000.00	SWU
M-D Public Works	Miller Road Drainage Retrofit	368,063.00	SWU
M-D Public Works	NE 146 St between NE 12 Ave and NE 14 Ave	216,880.91	SWU
M-D Public Works	Starlight Development, Ph. I Drainage Improvement (NW 207 Dr - NW 206 Ter from NW 44 Ct - 47 Ave)	682,280.00	QNIP/SWU
M-D Public Works	Repetitive Loss Area - Arch Creek	4,528,519.02	QNIP
M-D Public Works	Drainage Improvement Project Multiple Sites - NW 69 Street from NW 32 Avenue to NW 35 Ave; NW 75 Street and NW 16 Ave ;SW 116 Ave and SW 185 Street ;SW 115 Ave & SW 185 St	250,000.00	UNKNOWN

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
Completed Projects		Cost	Funding Source
M-D Public Works	NW 185-191 St & NW 44-47 Ave (King's Gardens) [MP 8020, 8023, 623]	722,381.00	QNIP/SWU
M-D Public Works	NPDES OUTFALL (53-41-12-NE001C)	386,747.00	QNIP/SWU
M-D Public Works	NW 178 Street to NW 176 Street from NW 82 Avenue to NW 78 Avenue Drainage Improvement Project (Norman and Jean Beach Park ROW Drainage)	650,000.00	SWU
M-D Public Works	NPDES OUTFALL North Miami Ave from NE 91 St to Little River Canal	141,923.00	QNIP/SWU
M-D Public Works	NW 178 Terrace from NW 47 Avenue to NW 48 Court Drainage Improvement Project	116,275.00	SWU
M-D Public Works	NW 191 St from NW 2 -9 Ave Drainage Improvement	401,695.00	QNIP/SWU
M-D Public Works	NW 20 St. from NW 33 -37 Ave	401,695.00	QNIP/SWU
M-D Public Works	NW 20 Street and NW 15 Avenue	146,519.41	SWU
M-D Public Works	NW 27-32 Ave & NW 191-199 St	229,694.00	QNIP/SWU
M-D Public Works	NW 35 Avenue from NW 73 Street to NW 74 Street Drainage Improvement Project.	126,228.00	SWU
M-D Public Works	NW 46 St to NW 53 St from NW 17-24 Ave (Allapatah, Phase II) [9060,9123]	873,000.00	QNIP/SWU
M-D Public Works	NW 46 St to NW 54 St from NW 32 Ave to NW 35 Ave [624,7081,7080]	245,129.00	QNIP/SWU
M-D Public Works	NW 53 Terrace from NW 69 Avenue to NW 72 Avenue	247,989.99	SWU
M-D Public Works	Oleta River - NE 183 Terrace from NE 23 Court to NE 24 Avenue	183,326.00	SWU
M-D Public Works	Palm Springs North, Phase I	435,739.00	QNIP/SWU
M-D Public Works	Palm Springs North, Phase II	340,423.00	QNIP/SWU
M-D Public Works	Palm Springs North, Phase III	261,205.00	QNIP/SWU
M-D Public Works	Pump Stations Improvement Service Contract (various pump stations sites)	500,000.00	SWU
M-D Public Works	PWD Project No. 20070696)	2,981,645.00	RIF
M-D Public Works	PWD Project No. 20090089 JPA with Town of Cutler Bay PTP	519,794.00	JPA with Town of Cutler Bay PTP
M-D Public Works	Queen's Park Drainage Improvements, NW 114 St & NW 19 Ave	48,894.00	QNIP/SWU
M-D Public Works	Rucks Park Pump Station Improvements (NE 138 St & NE 4 Ave) [S:\ 4030, 610]	540,000.00	QNIP/SWU
M-D Public Works	S.W. 82nd Avenue between S.W. 48th Street & S.W. 56th Street Drainage Improvement	65,877.00	SWU
M-D Public Works	San Mateo, Phase I (NW 67 - 74 Ave from NW 169 Ter - 167 St) [8060] [780]	546,000.00	QNIP/SWU
M-D Public Works	San Mateo, Phase II (NW 82 - 87 Ave from NW 170 - 171 ST) [8060]	441,000.00	QNIP/SWU

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
Completed Projects		Cost	Funding Source
M-D Public Works	San Mateo, Phase III (NW 78 - 82 Ave from NW 170 - NW 171 ST) [8060]	626,100.00	QNIP/SWU
M-D Public Works	San Sebastian Drainage Improvement Project - SW 42 Street to SW 47 Street between SW 132 Avenue to SW 133 Avenue	911,000.00	QNIP/SWU/G OB
M-D Public Works	San Sebastian Phase I Drainage Improvement Project - SW 42 Street to SW 47 Street between SW 132 Ave - SW 133 Ave	286,000.00	QNIP/SWU
M-D Public Works	San Simeon Way from NE 215 ST to NE 205 ST	729,145.00	SWU
M-D Public Works	Seaboard Acres Ditch Enclosure (NE 4 Ave from NE 141 St & 142 St)	350,000.00	QNIP/SWU
M-D Public Works	Serena Lakes and Stonewood Area: SW 137 CT from SW 181 ST to SW 181 TER	50,731.00	QNIP/SWU
M-D Public Works	Serena Lakes and Stonewood Area: SW 138 PL- 138 CT from SW 180 ST to SW 184 ST	133,241.00	QNIP/SWU
M-D Public Works	Serena Lakes and Stonewood Area: SW 139 PL- 139 Path from SW 180 ST to 184 ST	262,078.00	QNIP/SWU
M-D Public Works	Serena Lakes and Stonewood Area: SW 144 PL from SW 172 ST to Cul de Sac (Additional Site)	29,175.00	QNIP/SWU
M-D Public Works	Serena Lakes and Stonewood Area: SW 168 ST from SW 141 CT to SW 143 PI (Site 9)	122,278.00	QNIP/SWU
-D Public Works	Serena Lakes, SW 137 - 142 Ave & SW 180 - 172 St.	1,628,829.00	SWU
M-D Public Works	South Miami Ave from SW 21 Rd to SW 25 Rd	495,429.00	SWU
M-D Public Works	South Miami, Phase 1-C / Phase 2 (SW 62 Ave - SW 74 Ave from SW 40 St - SW 50 St) [3081,3086]	846,726.00	QNIP/SWU
M-D Public Works	Starlight Development, Ph. 2 Drainage Improvement (NW 207 Dr - 200 St from NW 39 Ct - 44 Ct) [S:\ 615,6005,6020, 6000]	687,654.00	QNIP/SWU
M-D Public Works	Streamland Gardens Drainage Improvement Project (NW 32 AV & NW 24 ST RD)	195,431.73	SWU
M-D Public Works	Sunshine Industrial Park Drainage Improvement Project (NW 159 Drive between NW 8 Ave to NW 12 Ave)	600,000.00	SWU
M-D Public Works	SW 100 Avenue and SW 30 Street Drainage Improvement Project (10010 SW 30 Street)	50,000.00	SWU
M-D Public Works	SW 100 Terrace and SW 117 Avenue Drainage Improvement Project (11624 SW 100 Terrace)	100,000.00	SWU
M-D Public Works	SW 122nd Avenue & SW 10th Street {340}	**	SWU
M-D Public Works	SW 128 ST FROM SW 122 AVE TO THE CUL-DE-SAC	177,214.00	SWU
M-D Public Works	SW 94 Avenue between SW 8 Street to SW 15 St.	312,150.95	SWU
M-D Public Works	SW 95 Street and SW 112 Avenue	50,000.00	SWU
M-D Public Works	SW 129 Ave - 135 Ave & SW 256 St - 268 St (Meadowood/Cedar Creek Phase II)	308,900.00	QNIP/SWU

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
Completed Projects		Cost	Funding Source
M-D Public Works	SW 134 Avenue and SW 26 Street (Matos)	30,000.00	SWU
M-D Public Works	SW 137 Ave between SW 56 St and SW 72 St	592,190.21	ARRA/SWU
M-D Public Works	SW 139 Ave from SW 8 to SW 42 St [9070]	1,795,000.00	SWU/QNIP
M-D Public Works	SW 176 Terr and SW 142 Ct (14242 SW 176 Terr)	100,000.00	SWU
M-D Public Works	SW 2 St & SW 136 Pl	57,810.00	QNIP/SWU
M-D Public Works	SW 21 Street between SW 67 Avenue and SW 71 Avenue (7036-38 SW 21 St)	82,829.91	SWU
M-D Public Works	SW 252 Ter - 256 St & SW 124 Ave - SW 127 Ave (Meadowood/Cedar Creek Phase III)	554,716.41	QNIP/SWU
M-D Public Works	SW 260 ST from SW 139 Ave to SW 139 CT	372,560.00	Drainage Improvements
M-D Public Works	SW 34 St and SW 89 CT	83,561.00	SWU
M-D Public Works	SW 60 STREET & SW 70 AVENUE (6015 SW 70 AVENUE)	120,000.00	SWU
M-D Public Works	SW 64 St & SW 67 Ave {5095}	85,050.00	SWU
M-D Public Works	SW 70 Avenue to SW 71 Avenue from SW 12 Street to SW 13 Street – Drainage Improvement	319,748.00	GOB
M-D Public Works	SW 12 Street and SW 73 Place Drainage Improvement Project	110,400.00	SWU
M-D Public Works	SW 73 Avenue and SW 12 Street	59,053.00	SWU
M-D Public Works	SW 74 Avenue from SW 42 Street to Rail Road Crossing	322,317.86	SWU
M-D Public Works	SW 76 Avenue from SW 10 Street to SW 12 Street	111,705.00	GOB/SWU
M-D Public Works	SW 82 Street from SW 76 Ave to SW 74 Ave	11,500.00	SWU
M-D Public Works	SW 87 AVE & SW 200 ST	163,000.00	SWU
M-D Public Works	SW 89 Avenue and SW 131 Street - Drainage Improvement Project	278,034.00	GOB 77456
M-D Public Works	SW 97 Ct & SW 1 St	18,859.00	QNIP/SWU
M-D Public Works	Swale Blocks at NE 172 ST & NE 10 AVE	70,000.00	SWU
M-D Public Works	N.W. 17th Avenue between N.W. 29th Street & N.W. 35th Street Drainage Improvement Project	60,920.54	PTP/SWU
M-D Public Works	NE 15 court between NE 205 st & NE 199 St	326,569.28	SWU
M-D Public Works	NE 171 Street and NE 11 Court Drainage Improvement Project	125,000.00	SWU
M-D Public Works	NE 147 St from NE 12 - 14 Ave	120,000.00	QNIP/SWU
M-D Public Works	NE 131 Lane and NE 16 Avenue	150,000.00	SWU
M-D Public Works	NW 27 Avenue and NW 21 Street Drainage Improvement Project	193,587.00	SWU
M-D Public Works	NW 12 Avenue from NW 186 St to NW 195 St Drainage Improvement	223,225.00	QNIP/SWU
M-D Public Works	NW 10 Ave from NW 103 ST-NW 100 ST	69,260.08	SWU
M-D Public Works	NPDES OUTFALL NW 22 Ave from NW 124 St - 139 St	664,196.00	QNIP/SWU
M-D Public Works	North Miami Avenue from NE 87 St. to 105 St.	157,785.32	WO# 1

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
Completed Projects		Cost	Funding Source
M-D Public Works	New Little River Drainage Improvement Project	482,816.23	QNIP/SWU
M-D Public Works	NE 89th Street & Bayshore Drive	340,308.91	SWU
M-D Public Works	NE 88 Terr from Biscayne Blvd to east end of road	55,000.00	SWU
M-D Public Works	NE 5 Court and NE 147 Street (14730 NE 5 Court)	15,000.00	SWU
M-D Public Works	NE 5 Avenue from NE 143 Street to NE 145 Street Drainage Improvement Project.	120,000.00	SWU
M-D Public Works	NE 2nd Avenue between NE 116th Street and NE 117th Street Drainage Improvement Project	195,125.24	SWU
M-D Public Works	Palm Springs North, Phase IV (NW 170 St - 181 Terr from NW 75 Pl - 79 Ave	122,598.00	QNIP/SWU
M-D Public Works	Oak Brooke - SW 160 Street - SW 180 Street between SW 102 - SW 112 Avenue	2,074,318.42	SWU
M-D Public Works	NW 46 Street to NW 52 Street from NW 35 Ave to NW 37 Ave	903,329.00	QNIP/SWU
M-D Public Works	NW 109 Street from NW 11 Avenue to NW 10 Avenue	159,000.00	SWU
M-D Public Works	NW 93 Street and Little River Boulevard Drainage Improvement Project	166,764.65	SWU
M-D Public Works	NW 67 Street from NW 32 Aveto NW 33 Ave	190,000.00	SWU
M-D Public Works	NW 65 St W/O NW 18 Ave	34,000.00	SWU
M-D Public Works	NW 143 Street from NW 7-17 Ave	261,251.00	QNIP/SWU
M-D Public Works	NW 82 Avenue from West Flagler Street to NW 3 Street MIDWAY ADDITION Phase I	325,000.00	SWU
M-D Public Works	OCL1-103, C-8 Basin Project (NW 22 Ave from SR 9 to N. Burlington St)	145,200.00	QNIP/SWU
M-D Public Works	NW 99 Street from NW 21 Avenue to NW 22 Avenue Drainage Improvement Project	93,492.00	SWU
M-D Public Works	NW 117 St From NW 12 Ave to NW 14 Ave Drainage Improvements	120,000.00	SWU
M-D Public Works	NE 214 Street and NE 20 Court	100,000.00	SWU PTP
M-D Public Works	NE 208 Terr. & NE 26 Ave. Drainage Improvement	106,268.00	QNIP/SWU
M-D Public Works	NE 201 Street and NE 25 Avenue Drainage Improvement Project	30,000.00	SWU
M-D Public Works	SW 128 ST from SW 127 Ave and SW 125 Ave	15,000.00	SWU
M-D Public Works	NE 18 PL from NE 211th Terrace to NE 214th Terrace	623,891.52	SWU
M-D Public Works	SW 31 Street from SW 65 Avenue to SW 67 Avenue Drainage Improvement Project	124,281.00	SWU
M-D Public Works	SW 160 Terr from SW 139 Ave to SW 140 Ct,	95,000.00	SWU
M-D Public Works	SW 288-296 St & SW 152-157 Ave (Leisure City, Phase I & Phase II)	984,854.00	QNIP/SWU
M-D Public Works	SW 27 Avenue from US-1 to Bayshore Drive (Phases I & II)	4,039,657.00	PTP

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
M-D Public Works	NW 96 ST FROM NW 13 AVE TO NW 14 AVE	119,660.00	SWU
Completed Projects			Funding Source
M-D Public Works	NW 95 Street from NW 2nd Avenue to NW 6th Avenue	540,357.00	SWU
M-D Public Works	NW 95 Terr Between NW 13 Ave to NW 14 Ave	64,579.24	SWU
M-D Public Works	NW 78 Ave to NW 84 Ave from NW 7 ST to NW 10 Midway Pump Station	4,965,866.25	GOB/SWU
M-D Public Works	NW 82 Avenue from NW 3 Street to NW 7 Street (Midway Add. Phase II) and NW 3 Street from NW 82 Avenue to NW 84 Avenue (Midway Add. Phase III)	598,306.00	SWU / QNIP
M-D Public Works	NW 41 St to NW 54 St from NW 19-24 Ave (Allapatah, Phase I	2,973,676.50	QNIP/SWU
M-D Public Works	NW 65 St E/O NW 18 Ave	42,000.00	SWU
M-D Public Works	NW 64 St from NW 21 Ave to NW 20 Ave	44,000.00	SWU
M-D Public Works	NW 50 St from NW 69 Ave to NW 72 Ave	100,000.00	SWU
M-D Public Works	NW 101 ST from NW 23 AVE to NW 22 AVE	112,529.41	SWU
M-D Public Works	NW 105 Terrace from NW 11 Avenue to NW 12 Avenue	80,000.00	SWU
M-D Public Works	NW 105 Street and NW 19	104,978.33	SWU
M-D Public Works	NW 106 Street from NW 12 Ave to NW 10 Ave	270,366.00	GOB/SWU
M-D Public Works	NE 110 Street from NE 2 to NE 3 Ave Drainage Improvement Project	60,920.54	SWU
M-D Public Works	Telemetry Network Installation including 28 Satellite Canal Level Recorders and Rain Gauges	1,100,000.00	GOB/SWU
M-D Public Works	The Tropics Drainage Improvements (NW 35 Ave - NW 36 Ave from NW 97 St - NW 101 St)	98,382.00	QNIP/SWU
M-D Public Works	Tropical Estates Phase 3- SW 99 Ct to SW 102 Ave from SW 52 Terr to SW 55 St	330,000.00	SWU
M-D Public Works	Tropical Estates Phase 4 SW 98 Avenue to SW 102 Avenue from SW 48 Street to SW 51 Terrace	229,120.00	SWU
M-D Public Works	Tropical Estates Sub. Phase 1 & 2 - SW 56 Street to SW 49 Street from SW 97 Ave to SW 98 Court	438,927.00	SWU
M-D Public Works	Twin Lakes (CC7-N-10, Project 9), Phase I / Twin Lakes, Phase 2 (NW 99 St - NW 102 St NW 12 – 14 Ave - NW 14 Ave	460,857.00	QNIP/SWU
M-D Public Works	West Miami Lakes, Phase II [3065B]	306,158.00	QNIP/SWU
M-D Public Works	Wynona Park Drainage Improvement (NW 7 - 8 St from NW 72 - 76 Ave) [602]	327,683.00	QNIP/SWU
M-D Public Works	Highland Lakes Blvd., Ph. III	609,331.00	QNIP/SWU
M-D Public Works	Highland Lakes, Ph. I-A, I-B-1& I-B-2	561,597.00	QNIP/SWU
M-D Public Works	J. G. Head Farms, SW 26 - 40 St. & SW 127 - 132 Ave	746,709.00	QNIP/SWU
M-D Public Works	JG Head Farms Phase II C	1,350,180.00	GOB/SWU
M-D Public Works	Miami River Outfall Retrofit, Basin 21	2,600,000.00	QNIP/SWU
M-D Public Works	Country Lake Manors, Sec. 2 Drainage	317,505.00	QNIP/SWU

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
	Improvement (NW 200 St - NW 201 Ln from NW 57 Ct - NW 58 Pl)		
Completed Projects		Cost	Funding Source
M-D Public Works	CRS RL-6 Drainage Improvement	182,477.76	SWU
M-D Public Works	Coral Gables Waterway Canal, Phase II, III ,IV,V,VI & VII. Agreement 2.	0	SWU
M-D Public Works	Larchmont Backflow Preventors	82,000.00	QNIP/SWU
M-D Public Works	Country Walk (Basin 3) [5071 B, 614, 5071A]	565,582.00	SWU
M-D Public Works	Country Walk (Basin 5) [5073a, 5073]	981,869.00	SWU
M-D Public Works	Country Walk Site 1 (SW 152 Ct from SW 150 St - 151 Ter)	123,300.00	SWU
M-D Public Works	Country Walk (Basin 6) [641, 5074]	1,154,809.00	SWU
M-D Public Works	Ives Dairy Rd. & NW 199 St Pollution Control Structure	61,000.00	SWU
M-D Public Works	Coral Way & Granada	30,000.00	SWU
M-D Public Works	193 Polygon 221A Coral Gables Waterway Canal, Phase VIII, IX, X, XI & XII, XIII, XIV, XV,XVI.	6,533,000.00	SWU/NRCS Grant
M-D Public Works	HIGHLAND LAKES PHASE 4	263,225.00	QNIP/SWU
M-D Public Works	Country Walk (Basin 7) [641, 5074]	1,154,809.00	SWU
M-D Public Works	Highland Lakes, Ph. II	171,866.00	QNIP/SWU
M-D Public Works	Kendall Point Drainage Improvement (SW 86 Ave - SW 83 Ave from SW 87 St - SW 84 St)	676,979.00	QNIP/SWU
M-D Public Works	Melrose St	130,000.00	QNIP/SWU
M-D Public Works	Leisure City Phase I	29,300.00	SWU
M-D Public Works	LAKES OF ACADIA	141,784.71	SWU
M-D Public Works	Country Walk (Basin 2)	565,582.00	SWU
M-D Public Works	Coral Gables Loop Phase 1 & 2	800,000.00	SWU/NRCS/SF WMD
M-D Public Works	Broadmor Manor (NW 102 Street from NW 22 Avenue to NW 24 Avenue)	120,965.40	SWU
M-D Public Works	Biltmore Park	695,000.00	SWU
M-D Public Works	Belen Phase IIIA	1,600,000.00	SWU
M-D Public Works	Belen Phase I	1,328,614.00	QNIP/SWU
M-D Public Works	Bel-Aire Drainage Improvements (SW 184 - 190 St from SW 82 - 97 Ave)	1,337,000.00	QNIP/SWU
M-D Public Works	Basin 4	877,200.00	QNIP/SWU
M-D Public Works	234 Polygon 280A American Homes Drainage Improvement (SW 152 St - SW 157 St from SW 144 Ct -Black Creek Canal) [1011] QNIP/SWU SW 144 Ave & SW 154 Terr C1-C-12 C-1 C-1	562,029.00	QNIP/SWU
M-D Public Works	Meadow Wood Phase 4A	701,583.00	QNIP/SWU
M-D Public Works	Miami River Outfall Retrofit, Basin 23, Ph. 1 & 2	842,873.00	QNIP/SWU
M-D Public Works	Belen Phase III	2,600,000.00	SWU
M-D Public Works	Carol City Canal Culvert at NW 39 Ave and NW 199 ST.	755,734.00	QNIP/SWU
M-D Public Works	Coral Way to Bird Road SW 67 Ave to SW 72 Ave	102,785.00	SWU
M-D Public Works	Drainage Improvement Project Multiple Sites	41,382.00	SWU

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
	(SW 118 Ave and SW 10 ST)		
Completed Projects		Cost	Funding Source
M-D Public Works	Driveway approach reconstruction near NW 52 Avenue and NW 190 Street	5,000.00	SWU
M-D Public Works	Brownsville Site 2, 3125 NW 48 TERR	93,501.00	QNIP/SWU
M-D Public Works	Brownsville Site No. 5, 4500 NW 33 Ave	75,000.00	QNIP/SWU
M-D Public Works	Blue Lagoon from NW 57 Ave to NW 62 Ave Drainage Improvements	432,584.00	SWU
M-D Public Works	Arch Creek Estates Drainage Improvements (NE 142 - 149 St from NE 14 - 18 Ave)	4,720,000.00	QNIP/SWU
M-D Public Works	NW 22 CT FROM NW 128 ST TO EAST GOLF DR.	32,191.00	SWU
M-D Public Works	Lawrence Waterway @ NW 7 St / 18 Ave.	73,063.00	QNIP/SWU
M-D Public Works	Miller Dr. from SW 132 AVE to SW 134 PL	200,000.00	SWU
M-D Public Works	Brownsville Site No. 6, 3295 NW 43 Terr	69,000.00	QNIP/SWU
M-D Public Works	13200 block of SW 6 ST	19,000.00	QNIP/SWU
M-D Public Works	Brownsville Site 1,	79,283.00	QNIP/SWU
M-D Public Works	Mini-Warehouses Drainage Improvement	59,569.00	QNIP/SWU
M-D Public Works	High Pines Phase II	2,300,000.00	SWU
M-D Public Works	Drainage Retrofit of Arterial Roadways Project	800,000.00	SWU
M-D Public Works	Drainage Improvement Project Multiple Sites	222,860.00	SWU
M-D Public Works	Drainage Improvement Project for NW 97 Ave	327,813.97	SWU
M-D Public Works	CRS# RL-1 Munne Subdivision	1,524,555.00	SWU
M-D Public Works	CRS# RL-1 Lormar Subdivision	736,570.64	SWU
M-D Public Works	Country Walk Site 3 (SW 144 St - SW 148 Ter from SW 152 Ave - 153 Pl)	432,674.00	SWU
M-D Public Works	Country Walk Basin 1 (SW 150 St-151 Ter from SW 144 Ct-151 Ave)	1,074,689.00	SWU
M-D Public Works	Coral Way Homesites (SW 80 Avenue from SW 30 Street to SW 28 Street and SW 30 Street from SW 81 Avenue to SW 79 Court)	1,029,202.00	SWU
M-D Public Works	Coral Way Drainage Retrofit - SW 26 Street Between SW 119 Avenue to Florida Turnpike	246,736.00	SWU
M-D Public Works	Central Miami Drainage Improvement Project - (SW 38 ST FROM SW 75 AV TO S. LAKE DR. between SW 73 CT FROM SW 38 ST TO SW 39 ST)	203,520.00	SWU
M-D Public Works	C802-204, C-8 Basin Project (NW 22 Ave from SR 9 to Biscayne Canal)	400,000.00	QNIP/SWU
M-D Public Works	Brickell Area Drainage Improvement Project (South Miami Avenue b/t SE 14th to SE 10th St & SW 2nd Avenue b/t SW 11th to SW 9th St.)	542,894.92	SWU
M-D Public Works	Belen Conveyance	3,070,344.00	SWU
M-D Public Works	12800 block of SW 87 Ave	10,446.00	QNIP/SWU

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
M-D Public Works	SW 94 Terrace from SW 122 Avenue to End of cul-de-sac	60,800.00	SWU
Completed Projects		Cost	Funding Source
M-D Public Works	Dadeland Park Subdivision Drainage Improvement Project - SW 81 Street to SW 83 Street from SW 79 Avenue to SW 87 Avenue (Includes SW 89 Avenue from SW 85 Street to SW 88 Street (Snapper Creek Park))	600,000.00	SWU
St. Thomas University	Replacement of wood electric power pole	5,000.00	Self funded
Sweetwater	South Florida Water Management District Flood Protection Berm	1,000,000.00	SFWMD
Virginia Gardens	VG - 66 avenue storm drain, ADA, and road widening project	650,000.00	State of FL
Vizcaya Museum and Gardens	Emergency Structural Repairs	4,500,000.00	Bond
Completed Total	# of Projects: 223	\$ 117,848,514.33	
Under Construction		Cost	Funding Source
Aventura	NE 191st ST Improvements	711,962.00	City/grant
Aventura	NE 29 PL Phase II South	721,000.00	City
Aventura	NE 213th ST Sea Wall Restoration	1,387,000.00	City/Grant
Bal Harbour	IT Enhancements	170,800.00	CIP
Bay Harbor	Rehabilitation of the Broad Causeway Bridges	13,000,000.00	*
Coral Gables	Fire Station #3 Hurricane shutters	88,000.00	Capital Improvement
Coral Gables	Basin Inflow and Infiltration Upgrade	1,179,793.00	FDEP Grant Storm Sewer
Cutler Bay	Drainage Improvements - Manta Drive	488,600.00	Stormwater Utility
Cutler Bay	Reduction of Floating Debris	60,000.00	City budget
Cutler Bay	Canal Cleaning and Shaping Town wide	750,000.00	City Budget
Cutler Bay	Flood Zone Data GIS System	140,000.00	Stormwater Utility
Cutler Bay	Town Hall/EOC HVAC System	610,000.00	*
Cutler Bay	Town Hall/EOC Hardening Project (Mechanical HVAC System)	228,000.00	*
Cutler Bay	Portable Traffic Control Signs	200,000.00	*
Cutler Bay	Emergency Portable Air Conditioner Units	120,000.00	*
Cutler Bay	Municipal AM Emergency Radio Broadcast Station	85,000.00	*
Cutler Bay	Removal of Australian Pines and other Exotics	100,000.00	City Budget
Cutler Bay	Drainage Improvements - Manta Drive	488,600.00	Stormwater Utility
Doral	Stormwater Improvements 5-Year CIP: Year 3	1,265,749.00	Stormwater

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
			Fee – Secured
Under Construction		Cost	Funding Source
Doral	Stormwater Improvements 5-Year CIP: Year 2	1,017,150.00	FDOT Grant
Doral	Stormwater Improvements 5-Year CIP: Year 1	1,800,000.00	FDEP Grant
Doral	Stormwater Improvements 5-Year CIP: Year 3	1265749.00	Stormwater Fee
El Portal	Village of El Portal Stormwater Improvements	10,000,000.00	
Hialeah	Roadway/Stormwater Improvements (SE 4 ST to HIA DR from 6-8 AVE)	151,469.00	City Capital Improvement Funds
Hialeah Gardens	Central District Drainage Improvements	2,500,000.00	
Homestead	Sewer lines in the Northwest Neighborhood and the West Industrial Area	3,300,000.00	CIP
Homestead	Police Station Security/Hardening	50,000.00	Bond Issue
Homestead	Upgrade OCB's (Oil Circuit Breakers) with VCB's (Vacuum Circuit Breakers)	150000.00	CIP
Homestead	Improvements to Existing Buildings	500,000.00	CIP
Homestead	Sidewalks/ Roadway Improvements	200,000.00	CIP
Homestead	Improve Transportation Infrastructure	2,000,000.00	State/County Roads
Homestead	Wastewater Infiltration/Inflow	2,400,000.00	CIP
Key Biscayne	Flap Gates at Outfalls (Backflow Prevention)	750,000.00	Stormwater Utility/ Capital Expenditures
Medley	Flood Mitigation Area South	2,300,000.00	State, County & Town
Medley	Medley Public Services Facilities Strengthening	800,000.00	Town Budget
Medley	Drainage Improvements Phase III	270,000.00	Town Budget
Medley	Drainage Improvements Phase I	150,000.00	Town Budget
Medley	Drainage Improvements Phase II	450,000.00	Town Budget
Medley	Tobie Wilson Park Flood Proofing & Strengthening	800,000.00	Town Budget
Medley	Town Hall Building Strengthening	800,000.00	Town Budget
Miami	Acquire Portable Pumps and Generators	70,000.00	PDM
Miami Beach	Citywide Water Infrastructure Improvements	55,000,000.00	Unknown
Miami Beach	Citywide Dune Restoration & Enhancement Project	400,000.00	*
Miami Beach	Citywide Wastewater Infrastructure Improvements	2,250,000.00	*
Miami Beach	Drainage Hot Spots	**	*
Miami Beach	Flood Proofing Sewer and Pump Stations	2,340,000.00	*
Miami Beach	Central Bayshore – Neighborhood Improvements (34th Street South)	**	*
Miami Beach	Palm & Hibiscus Islands – Neighborhood	**	*

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
	Improvements		
Under Construction		Cost	Funding Source
Miami Beach	Venetian Islands – Neighborhood Improvements (Phase 2)	**	*
Miami Beach	Sunset Islands 3 & 4 – Neighborhood Improvements	**	*
Miami Beach	West Avenue Neighborhood Drainage Improvements	15,900,000.00	*
Miami Beach	Sunset Harbor Pump Station Upgrades / Drainage Improvements	800,000.00	*
Miami Beach	Purchase of a Safeboat for Miami Beach Police Dept. Marine Patrol	**	*
Miami Beach	Storage Tank Refurbishment Project	**	*
Miami Gardens	Create GIS Layer for Storm Sewer Infrastructure	100,000.00	Unsecured
Miami Springs	Engineering Study to determine sites of canal bank restoration	2,000,000.00	DEP of Water Prot. Assis
Miami Springs	Removal of Australian Pines	14,000.00	City Budget
Mount Sinai	Mitigate the Impact of Storm Surge	3,000,000.00	DEP
Mount Sinai	Protect the Energy Center Facility Chillers	2,000,000.00	Self funded
Mount Sinai	Code Plus Construction Enhancements Surgical Tower	6,500,000.00	FEMA
North Miami	Sanitary Sewer Backup	700,000.00	*
North Miami	Surge Resistance and Flood Mitigation at Keystone Point and Sans Souci	500,000.00	*
North Miami	Flood Prevention and Mitigation: Drainage Basin13	500,000.00	*
North Miami Beach	Install Additional Storm Water Basins or Increase Existing Basins	60,000.00	CIP
North Miami Beach	NE 172nd Street Drainage Improvement	1,791,692.00	CIP
North Miami Beach	Clean and Improve Drainage Systems	428,400.00	CIP
North Miami Beach	Eastern Shores Drainage Repair/Replacement	450,000.00	CIP
North Miami Beach	Construct Storm Water System that may include Injection Wells in Areas Prone to Flooding	120,000.00	CIP
North Miami Beach	Miami Industrial District Drainage and Roadway Improvement	800,000.00	CIP
North Miami Beach	Renovation of Eastern Shores Outfall Pipes	550,000.00	CIP
North Miami Beach	NE 172nd Drainage Improvement	17,916.92	CIP
North Miami Beach	Clean and Improve the Drainage System	428,000.00	CIP
Palmetto Bay	Drainage Improvements for Sub-Basin # 10	1,000,000.00	SFWMD Grant Stormwater Utility
Palmetto Bay	Flood Zone Data Maintenance: GIS System	100,000.00	General Funds
Palmetto Bay	Drainage Improvements - SW 87 AVE (from SW 168 ST to SW 184 ST)	1,500,000.00	MD County Stormwater

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
			Utility
Under Construction		Cost	Funding Source
Palmetto Bay	Downtown Redevelopment	12,440,000.00	County GOB Street Sign Bond General Funds
Public Housing & Comm Dev	Ward Tower	1,920,400.00	*
Public Housing & Comm Dev	Haley Sofge Towers	2,056,321.00	*
Public Housing & Comm Dev	Haley Sofge Towers	1,000,000.00	*
Public Schools	SW 82 ST from SW 73 Ave to SW 76 Ave	304,884.00	SWU
Public Schools	SW 165 Ave and SW 88 St	66,000.00	SWU
M-D Public Works	SW 220 St bet SW 103 CT & SW 102 Ave (10298 SW 229 ST	80,000.00	SWU
M-D Public Works	SW 207 Terrace from SW 124 Court to SW 126 Avenue Drainage Improvement Project	275,000.00	SWU
M-D Public Works	PWD Project No. 20130240 SW 2 Street to SW 4 Street from SW 82 Avenue and SW 87 Avenue	295,825.00	SWU
M-D Public Works	SW 2 Street to SW 4 Street from SW 82 Avenue to SW 87 Avenue Drainage Improvement Project PWD Project No.20130240	144,000.00	SWU
M-D Public Works	SW 176 Street from US-1 to SW 107 Avenue	4,434,642.00	PTP
M-D Public Works	SW 157 Avenue from SW 88 Street to SW 91 Street	213,519.00	SWU
M-D Public Works	SW 157 Avenue from SW 184 Street to SW 152 Street	7,128,130.00	PTP
M-D Public Works	SW 152 Street and SW 82 Avenue Drainage Improvement Project	220,000.00	SWU
M-D Public Works	SW 132 Avenue from SW 117 Terrace to SW 120 Street	392,645.00	PTP
M-D Public Works	SW 104 Street from SW 157 Avenue to SW 142 Avenue	505,335.00	SWU
M-D Public Works	Seaboard Acres Pump Station Retrofit	3,317,350.00	SWU/GOB
M-D Public Works	PWD Project No. 20120157 WO#1) (GOB	295,279.00	GOB
M-D Public Works	PWD Project No. 20040389 (PTP) (JPA with City of Miami)	5,663,390.00	(PTP) (JPA with City of Miami)
M-D Public Works	PWD Project No. 20040386 (PTP) (JPA with City of Miami)	4,702,799.00	(PTP) (JPA with City of Miami)
M-D Public Works	Project No. 20120047 Town of Miami Lakes	93,321.00	Unknown
M-D Public Works	Old Cutler Road Bike Path (Phase II)	1,131,821.00	PTP
M-D Public Works	NW 87 Avenue from NW 154 Street to NW 186 Street	490,256.00	PTP
M-D Public Works	NW 74 Street from NW 87 Avenue to Palmetto Expressway	5,802,503.00	PTP

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
M-D Public Works	NW 58 Street from NW 92 Avenue to NW 102 Avenue - Drainage Improvement Project	1,075,000.00	GOB 77465
Under Construction		Cost	Funding Source
M-D Public Works	NW 37 Avenue from North River Drive to NW 79 Street	14,855,900.00	PTP
M-D Public Works	NW 178 Street from NW 89 Avenue to NW 90 Court	72190.00	SWU
M-D Public Works	NE 18 Avenue from NE 191 Street to NE 199 Street (NE 18 Avenue & NE 199 Street)	280,241.00	SWU
M-D Public Works	NE 167 Street & NE 14 Avenue	50,000.00	SWU
M-D Public Works	NE 12 Ave & NE 169 Terrace	128,302.00	SWU
M-D Public Works	Miller Drive & SW 133 PL	223,000.00	GOB
M-D Public Works	Midway Addition (Phases V, VI & VII) Drainage Improvement Project	867,050.00	GOB
M-D Public Works	Miami River Greenways	510,359.00	GOB
M-D Public Works	Miami River Greenways	1,193,721.00	GOB
M-D Public Works	Larchmont Pump Station Retrofit	4,665,069.00	SWU GOB
M-D Public Works	Larchmont Pump Retrofit Station Phases 1 & 2	3,300,000.00	SWU/GOB
M-D Public Works	Drainage Improvement PWD Project No. 20130156)	632,910.00	GOB/SWU
M-D Public Works	Drainage Improvement PWD Project No. 20120161)	189,372.00	QNIP
M-D Public Works	Arch Creek Phase IV- Pump Stations Improvements	120,000.00	SWU
M-D Public Works	Drainage Improvement Project - SW 99 Ave & SW 101 St; SW 129 AVE & SW 116 ST	0	Unknown
South Miami	SW 64 Avenue Drainage Improvement Project	115,230.00	Storm water People's Transportation Plan
South Miami	Citywide Drainage Improvements, Phase 6	275,000.00	
Vizcaya Museum and Gardens	Vizcaya Village Roof Replacement & Roof Structure Reinforcement	2,500,000.00	General Obligation Bond
West Miami	Impact Resistant Windows for City Hall	52,000.00	General Fund
Under Construction Total	# of Projects: 122	\$ 239,143,336.97	
Funded Not Yet Started		Cost	Funding Source
Bal Harbour	Jetty Pedestrian walking surface repairs	332,000.00	Capital Proj. Reserve Fund
Bal Harbour	Sewall and Dock Repair BHV park	55,000.00	Capital Projects Reserved Funding
Cutler Bay	Debris Removal	400,000.00	Grants

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
Funded Not Yet Started		Cost	Funding Source
Cutler Bay	Preventive Pruning of Existing Town Tree Inventory	285,000.00	Town Budget
Cutler Bay	Storm Water Outfalls	500,000.00	Stormwater Utility Fund,
Doral	NW 41 St. from NW 79 Ave. to NW 87 Ave. Roadway Improvements	1,850,000.00	General Fund. Private Dev. /Impact Fee Credit
Doral	Stormwater Improvements 5-Year CIP: Year 4	1,047,694.00	City's Stormwater
Emergency Management	Barbara Goleman Senior Survey	**	State Retrofit Funding
FiCity	Repair of Sewer Lines in Friedland Manor	475,000.00	CDBG, Legislative Appropriation, City funds
Hialeah	Roadway Reconstruction (W 8-10 Ave from W 31-33 Street)	2,190,724.00	CDBG
Homestead	New Sewer Mains: To upgrade sewer main/lines to eliminate raw sewage from leaking into the water table.	2,000,000.00	CIP
Jackson	Volt Oil Switch Replacements	7,350,000.00	GOB & Jackson's Bond Referendum
Jackson	Emergency Switchgear Replacements at JNMC	6,950,000.00	GOB & Jackson's Bond Referendum
Jackson	Utility/Energy Center at JMH	5,290,000.00	GOB 2005 & Jackson's Bond Referendum
Key Biscayne	Reverse 911 Community Notification System	105,000.00	Capital Improvement Fund
Key Biscayne	Purchase of Emergency Vehicles	75,000.00	Capital Improvement Fund
Key Biscayne	New Stormwater Outfall Construction	210,000.00	Private funding.
Key Biscayne	Coastal Dune Vegetation	10,000.00	Capital Improvement Fund
Key Biscayne	Additional Training	2,500.00	Fire Training Budget
Miami	Station/Facility Apparatus Room Doors	252,000.00	PDM
Miami	Mitigation & Resiliency Initiative for Historic	139,500.00	Grants

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
	Neighborhoods in the City of Miami		
Miami	Watson Island Baywalk	300,000.00	PDM
Funded Not Yet Started		Cost	Funding Source
Miami	Study to Reduce Erosion on Virginia Key Beach	75,000.00	PDM
Miami	Restoration of Native Species	75,000.00	PDM
Miami	Property Maintenance Division Upgrades	160,000.00	PDM
Miami	Hurricane Window Barriers for Park Recreation Buildings	250,000.00	PDM
Miami	Fire Station Hardening	144,000.00	PDM
Miami	Protect Vital City Records	60,000.00	FMA
Miami	Communications Systems Generator	60,000.00	PDM
Miami Beach	Indian Creek Drive 25th to 41st Street Drainage Improvements	2,700,000.00	FDOT and Miami Beach
Miami Beach	Cultural and Historical Resources Hazard Mitigation Plan	**	FEMA and City of Miami Beach
Miami Gardens	Vista Verde Drainage and Roadway Improvement Project	3,800,000.00	Stormwater, CDBG, CITT, FL Legislative Appropriations Grants
Miami Gardens	Culvert and Headwall Project	400,000.00	Potential
Miami Gardens	NW 13 Avenue/Industrial Area Drainage Outfall Project	230,000.00	Stormwater Funding
Miami Gardens	NW 11 Avenue Stormwater Drainage Project	100,000.00	Stormwater Funds
Mount Sinai	Code Plus Construction Energy Center Facility Protect Redundant Power Supply	250,000.00	*
North Miami Beach	Leak Detection Services	50,000.00	CIP
North Miami Beach	Drainage in Alleyways	50,000.00	CIP
North Miami Beach	Storm Water Pump Replacement Program	50,000.00	CIP
North Miami Beach	Pump Replacements	165,000.00	CIP
North Miami Beach	Force Main Installations and Lift Stations Rehabilitations	125,000.00	CIP
North Miami Beach	Aerial Pipe Crossings	350,000.00	CIP
North Miami Beach	Inflow and Infiltration Prevention	250,000.00	CIP
North Miami Beach	Fire Flow Improvements	320,000.00	CIP
North Miami Beach	Trenchless Pipe Replacements	325,000.00	CIP
North Miami Beach	Roadway Improvements	327,000.00	CIP
North Miami Beach	Storm Water Improvement City-Wide	336,885.00	CIP
North Miami Beach	Dead End Eliminations	42,000.00	CIP
Palmetto Bay	Localized Drainage Improvements Phase VI	403,733.00	Stormwater

Local Mitigation Strategy Project Status Reported 01/2016-12/31/2016			
			Utility/Grants
Funded Not Yet Started		Cost	Funding Source
Palmetto Bay	Sub-Basin 59/60	1,100,000.00	SFWMD and Stormwater Utility Revenue
Palmetto Bay	Public Information and Educational Campaign	16,500.00	Stormwater Utility Funding
Palmetto Bay	Repetitive Loss Retrofit	313,570.00	Stormwater Utility Revenue
M-D Public Works	SW 92 AVE FROM SW 8 TER TO SW 12 ST ROADWAY DRAINAGE	616537.22	SWU FUNDING CAPITAL PROJECT
M-D Public Works	NW 76 ST FROM NW 36 AVE TO NW 37 AVE	425,000.00	SWU
M-D Public Works	Seaboard Acres Pump Station	1,500,000.00	*
M-D Public Works	Larchmont Gardens Pump Station	1,671,841.00	*
M-D Public Works	NE 6 AVE& NE 185 Street; NE Miami CT, from NE 196-198 ST; NW 22 AVE & NW 175 ST; North DR & NE 14 AVE	835,000.00	*
M-D Public Works	Belen Phase III B	1,590,000.00	SWU
M-D Public Works	SW 157 AVE Canal Interconnect	**	*
Virginia Gardens	VG - NW 40 street Stormwater Improvement Project	697,000.00	FDOT
Funded - Not Yet Started	# of Projects: 60	\$ 49,683,484.22	
Total Projects	405	\$ 406,675,335.50	

* Funding source not provided

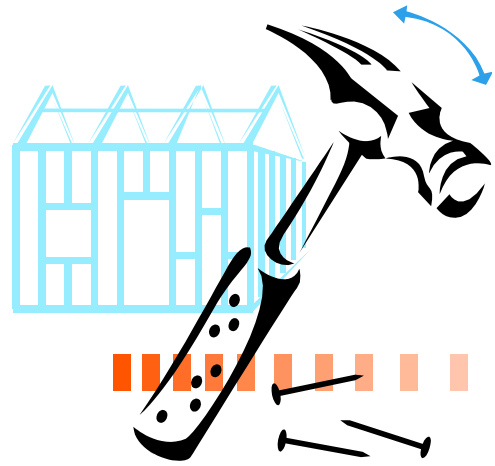
** Project estimates were not available at time document went to print.

**Partners
make it happen!**



We're still at it so there's more to come!

The
Local Mitigation Strategy



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